

THE U K MARKET FOR
I B M EQUIPPED BUREAUX

INPUT EUROPE

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THE UK MARKET FOR
IBM EQUIPPED BUREAUX

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PREPARED FOR SCICON COMPUTER SERVICES LTD

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FOR A
CUSTOM STUDY ENTITLED

THE MARKET FOR IBM MAINFRAME BASED BUREAUX IN THE U.K.

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I. INTRODUCTION

I. INTRODUCTION

- This report on IBM based Computer Bureaux has been prepared for SCICON COMPUTER SERVICES LTD. it follows a similar report on ICL based bureaux dated 24th July 1978. It was commissioned by Mr. J.J. O'Malley.
- The approach taken has been to telephone a selection of small, medium and large Bureaux to obtain information on hardware plans and changes, growth rates and size, supplementary to INPUT's existing records.
- In addition to telephone interviewing, two visits have been made to IBM. One visit was made to the manager in charge of support to IBM based Bureaux. The other visit was to a Branch Manager with marketing responsibility fo IBM's own Bureau services.
- Recent INPUT reports of relevance were reviewed together with the CAMP (Company Analysis and Monitoring Programme) information on file. These provided the basis for Bureau identification and a cross check with the Computer Users Yearbook was carried out. The INPUT reports also provided a basis for technical comment on recent IBM announcements.
- Overall forecasts of market size are taken from published INPUT data on the Computer Services Industry.

II. EXECUTIVE SUMMARY

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A. MARKET SHAPE AND SIZE

- INPUT's 1979 forecast of the UK Computer Services Market size is £341.4m of which £212.2m (62%) is estimated to be Computer Bureau Revenue.
- IBM based Bureaux account for an estimated 59% (£124.4m) of total revenues. However this figure includes captive revenue (i.e. revenue derived from the main parent company).
- If captive revenues are removed from Bureaux sales figures, the external sales of IBM based Bureau Services are estimated at just under £52m.
- The Bureau services market appears to have a growth rate of 27% at present. The Remote Computer Services sector is growing at more than 35% per annum compared to the Batch Sector which is growing at about 15% per annum.
- It is estimated that there are seven Bureaux currently, each with an external sales turnover of IBM services which exceeds £2.5m. They are BOC, UCSL, Centrefile, Lowndes-Ajax, Compower, GEC Midland and IBM. Together, these seven are estimated to capture external IBM service revenues worth £22m, which is some 42% of the market for IBM non-captive Bureau business.
- Rankings of Bureaux by size are volatile. They also depend greatly on whether captive revenue is taken into account. BOC is believed to be the largest supplier of external IBM based services at present, although IBM has large unrealised potential in its new Warwick Computer centre.

B. IBM SERVICES - STRENGTHS & WEAKNESSES

- The UK has been divided into ten regions for analytical purposes. The Inner London region produces 34.5% of revenue and the next largest region is the Southern Home Counties which account for nearly 14% of non-captive IBM service revenues.
- IBM is notably weak as a supplier of interactive services. This is attributable to the poor cost performance of the 370 series hardware and software for time-sharing and to IBM's concentration on commercial applications support rather than the engineering and scientific sector. It is unlikely that more than 16% of the market for interactive time sharing services is captured by IBM Bureaux.
- IBM based Bureaux are strong in RJE services. This report estimates that the IBM based Bureaux capture 43% of the RJE market which is non-captive.
- IBM based Bureaux have about 20% of the non-captive market for over-the-counter batch processing services.

C. IMPLICATIONS OF NEW IBM PRODUCTS

- IBM have massively assaulted the market place with its new range of hardware products. The 4300 and 303X series and the 8011 series will be of considerable importance in the Bureau market. The 4300 series in particular gives dramatic price performance improvement over both the 370 series and 303X series machines.
- The 4300 series will be especially attractive where multiple mainframe processors can be justified and it may impact on sales prospects for the 303X series for this reason.

- Both the SNA network architecture of IBM and the 3790 series of network processors have been notable for their lack of market penetration. The 3790 was much too expensive and SNA has been restricting and cumbersome. However the 8100 series looks attractive as a 3790 replacement and will compete strongly with PCM alternatives.
- The new 8100 series competes for IBM business with the Series 1 which was released with poor quality software and inadequate technical support. The 8100 series is expected to attract more market support as a networking machine than the Series 1.
- The IBM Series 1 basic and applications software limitations will limit its market prospects for some time to come.
- The system 38 from IBM's General Systems Division is assured of a good market among low end IBM based Bureaux.

D. TRENDS AND OPPORTUNITIES

- Users of computer services are rapidly switching to interactive systems philosophy, aided by the sales efforts of distributed systems suppliers.
- Post-implementation maintenance of applications software is rapidly becoming a major problem for users of distributed processing equipment. This presents two market opportunities for RCS vendors. First, an opportunity exists to convince end users that RCS is the best way to secure data processing systems maintenance. This message is not getting across at present. Secondly, an opportunity exists to set up, with end user equity involvement, regional software houses to maintain applications programs for distributed processors.
- A new market opportunity exists for Bureau Wholesalers. At least one Bureau is supplying several smaller Bureaux with raw computer time and RJE terminals. These terminals have replaced small to medium size obsolete 360 series equipment.

- Use by interactive customers of time sharing utilities has now reached a level of expense and commitment where a significant opportunity exists to market task dedicated in-house time sharing systems as an alternative to using a utility. Two key task areas of importance are Financial Modelling and Fortran program development.
- The major market opportunity is still commercial applications for the smaller company. Many of these have primary applications needs for order processing and stock enquiry but not necessarily classic accounting systems since book-keeping is often relatively simple and straightforward.

E. OPPORTUNITIES FOR SCICON

- Three main opportunities exist for SCICON to move into the IBM based Bureau services market:

(a) Geographical Exploitation

The penetration of Bureaux outside London and the Northern Home Counties is low and affords an opportunity for Bureaux based outside London.

(b) Obsolescence Exploitation

An opportunity exists to sell Wholesale computer time to IBM Bureaux with obsolete equipment (see Exhibit IV-6). The exceptionally good cost performance of PCM's against IBM at the larger end of the range could be marketed attractively to the smaller Bureaux with IBM 360/50 hardware or smaller.

(c) Market Leader Exploitation

The IBM 4300 Series provides an opportunity to enter the IBM Bureau market on an advantageous price performance basis and build from the strength of the IBM reputation.

SCICON could exploit any one of the above opportunities in isolation or in combination.

III. CHARACTERISTICS WHICH TYPIFY IBM BUREAUX

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A. TYPE OF SERVICE

- A list of service definitions appears as Appendix - F to this report.
- The three basic categories used in this report for IBM based Bureaux are:
 - Batch
 - RCS (Remote Computing Services)
 - Comprehensive

- Batch

To qualify for the "Batch" classification, a Bureau must have magnetic tape handling facilities at its main centre. Several Bureaux operate an RJE link to an overseas mainframe which rules them out of the batch category.

- RCS

- (a) Bureaux with mainframes supporting RJE terminals at User sites
- (b) Bureaux providing batch processing services using an RJE facility linked to a mainframe computer located elsewhere. In this case there are no magnetic tape handling facilities at the Bureau.
- (c) Bureau providing interactive services through a network of mainly unintelligent terminals.
- (d) Bureaux providing mainframe processing back up support over data transmission lines connected to on-site minicomputers or small mainframes.

DISTRIBUTION OF ICL AND IBM BUREAUX BY SERVICE TYPE

BUREAU TYPE	IBM	ICL	TOTALS
Batch	46	47	93
RCS	12	7	19
Comprehensive	10	7	17
TOTALS	68	61	129

EXHIBIT III-1

- The Comprehensive category covers any size of Bureau which provides a Batch, Interactive and RJE facilities (not necessarily on the same machine).
- INPUT's sample of Bureaux summarised in Appendix E covers 72 with IBM only or IBM and other computers. Input also has records of 66 Bureaux with ICL only or ICL and other computers. To avoid double counting in IBM/ICL comparisons, the following Bureaux with both IBM and ICL equipment have been re-classified by their dominant mainframe supplier.

Mainly IBM

BOC
Centrefile
Compower
GMS
GRIP

Mainly ICL

Boeing
Hadrian
Douglas Moore
NDPS

After this re-classification, there are 68 IBM Bureaux and 61 ICL Bureaux making a total of 129 for both categories.

- More than three-quarters of ICL Bureaux are predominantly batch orientated whereas only two-thirds of IBM Bureaux are basically batch service orientated (see Exhibit III-1).
- Included in this review are IBM compatible equipment alternatives (ITEL and Amdahl).
- At the lower end of the Bureau market, there are several Data Preparation Bureaux and there is also one significant IBM based Word Processing Bureau.
- Service revenues vary by a factor of about two to one. At the top end, are services which have a high value added component - applications packages. At the bottom end providers of low value added services (raw time or program development services) can apply only around one-half of the mark-up on machine charges for service.

- Perhaps the major new interest is the development of bureau wholesalers. TEAMCO currently provides machine power to six smaller bureaux who have replaced their medium sized mainframes with RJE terminals.
- Appendix - C provides a classification of the IBM Bureaux in terms of the industry sectors which each bureau provides services to.
- Appendix - D provides a general classification by Applications type for each Bureau. The main split is between General Business Applications and Engineering/Scientific Applications.

B. OWNERSHIP

- IBM equipment Bureaux are classified in one of three ways:
 - Captive : Companies that have typically been in-house DP departments. The original parent company still purchases more than 30% of available capacity.
 - Private : Companies set up by individuals who retain overall voting control.
 - Corporate : Companies in which no single customer accounts for 30% or more of sales revenue. Voting control rests with outside corporations rather than executive management.
- One half of the IBM Bureaux are captive and of the eight Bureaux with sales exceeding £10m, six are captive (see Exhibit III-2).
- One-half of the IBM Bureaux which are Corporate, had sales running at less than £1m in 1978/9.
- Of the IBM Bureaux, only 12% are Private whereas 39% of ICL Bureaux are under Private control.

BUREAU OWNERSHIP IN RELATION TO SIZE

Total Sales Revenue From All Services Including Captive Revenues £'m	Private	Captive	Corporate	Total
T > 10	-	5	2	7
5 > T ≥ 10	-	4	3	7
1 > T ≥ 5	1	9	7	17
0 > T ≥ 1	7	15	15	37
TOTALS	8	33	27	68

EXHIBIT III-2

C. GEOGRAPHIC DISPERSION

- Exhibit III-3 shows that almost 35% of IBM Bureau external revenues are derived from machines based in inner London.
- IBM based Bureaux dominate the market in Inner London, Wales and the West Country and Ireland. They are weak by comparison with ICL in the North and in Southern England.
- There appears to be only one IBM based Bureau (OSPREY) south of the Southern Home Counties and it is very small.
- The strength of IBM based bureaux in Ireland is due entirely to CARA the Aer Lingus subsidiary.
- Revenue distribution can be distorted by the treatment of the larger Bureaux with mixed mainframe suppliers. These typically offer services on a wide and sometimes national coverage by means of their networks.
- Revenue is captured on a wide geographic basis by the following seven Bureaux in the IBM list:

BOC	NDPS
COMPOWER	RHM
GEC MIDLAND	UCSL
IBM	

These seven IBM Bureaux represent 42% of all IBM Bureaux external revenues.

- Exhibit III-3 shows a column in which external sales figures by region have been adjusted by re-distributing the externally derived revenues of the above seven Bureaux equally across all regions. This is an approximate correction because it does not allow for regional strengths and weaknesses by each of these operators. The effect of this redistribution of revenue is to reduce substantially the inner London and Midlands revenues and produce a corresponding increase across the other regions.

GEOGRAPHIC DISPERSION OF IBM BUREAUX

Region	No. IBM Bureaux	Total Revenue £'m	External Revenue £'m	Corrected External Revenue £'m	% Revenue Distribution (Corrected)	No. ICL Bureaux
London	25	58.82	22.59	12.11	34.5	9
Northern H.C.	5	11.00	3.29	4.22	7.1	7
Southern H.C.	10	19.03	11.01	7.91	13.7	13
Southern England	1	.05	.05	2.63	4.3	5
Midlands	6	22.75	6.14	3.28	5.4	6
Ireland	5	5.33	2.79	5.37	9.2	1
Wales/West	6	2.96	1.92	4.50	7.6	2
East Anglia	4	1.21	.80	3.38	5.6	3
North	3	1.09	.24	2.82	4.6	13
Scotland	3	2.10	2.10	4.71	8.0	2
TOTALS	68	124.34	50.93	50.93	100	61

EXHIBIT III-3

D. MAJOR IBM BUREAUX

- Of the 257 mainstream computer Bureaux in INPUT's records, 129 (50%) are either IBM or ICL based.
- Exhibit III-4 shows that by comparison with ICL, IBM have a much larger share of the large Bureaux.
- Of the 17 IBM or ICL Bureaux with overall sales turnovers of £5m or more, 14 (82%) are IBM based.
- Of the 112 Bureaux with sales turnovers of under £5m, IBM and ICL have an even distribution by size.
- Although Exhibit III-4 has used the overall sales figures for each Bureau (including professional services and captive revenue), this is arguably the best basis on which to classify IBM Bureaux by size. The larger Bureaux are of course the most important in terms of market revenue impact, and they tend to be quixotic about divulging information about captive revenues. For this reason, INPUT has had to estimate the captive share of revenue in some significant cases.
- In Appendix - A INPUT has estimated Bureau Sales revenues in four columns:
 - Total Sales
 - Total Bureau Sales
 - Total Bureau IBM Sales
 - External Bureau IBM Sales.

These figures are estimated from the following considerations:

- (a) Proportion of total staff employed on professional services activities which produce substantial direct revenue
- (b) Proportion of machine capacity attributable to IBM supplied hardware.
- (c) Proportion of non-captive bureau sales.

IBM/ICL BUREAUX - SIZE COMPARISON

Total Services Including Captive and Professional Services					IBM		ICL		TOTAL ICL & IBM	
£'m					Qty	%	Qty	%	Qty	%
	T	>	5		14	21	3	5	17	13
1	>	T	>	5	16	23	16	26	32	25
0	>	T	>	1	38	56	42	69	80	62
TOTALS					68	100	61	100	129	100

EXHIBIT III-4

- The method of applying these yardsticks to the major Bureaux can be demonstrated using Compower as an example:

<u>Revenue Type</u>		<u>Estimated Total Sales Revenue £ m</u>
(i)	300 Professional Staff at £16,500/P.P.p.a.	4.95
(ii)	IBM Mainframe Revenues	
	4 x Large £6.5m	
	1 x Medium £0.4m	
	1 x Small £0.2m	7.10
(iii)	ICL Mainframe Revenues	
	3 x Large £3.3	
	1 x Medium £0.6	3.90
	ESTIMATED TOTALS	£15.95m

- COMPOWER supplies the NCB's computer requirements and given the size of the NCB and the total COMPOWER hardware inventory, INPUT estimate that 60% of resources are devoted to captive NCB work. This gives estimated 40% or £2.84m of external IBM sales.
- The above example for a large captive IBM based bureau shows the basis of INPUT's estimates. It also shows that the significance of the major captive Bureaux can be easily overstated.
- The main criteria for classifying bureaux by size are:
 - (a) Total processing or data transmission capacity (whichever is the limiting factor)
 - (b) Total external sales of Bureau, professional and other services
 - (c) Total Bureau sales including direct technical support.
 - (d) Bureau sales by mainframe supplier.

Not surprisingly the ranking of Bureaux varies according to the criteria of size used. Exhibit III-5 shows how dramatically ranking position can vary.

TOP TEN BUREAUX RANKED BY SIZE

Rank	BASIS - Installed Machine or Data Transmission Revenue Potential	BASIS - Total External Bureau Turnover
1	NDPS	HONEYWELL
2	IBM	BARIC
3	COMPOWER	BOC
4	BOC	CENTREFILE
5	HONEYWELL	HOSKYNS
6	GEC MIDLAND	CMG
7	UCSL	UCSL
8	BARIC	LOWNDES-AJAX
9	CENTREFILE	COMPOWER
10	HOSKYNS	IBM

EXHIBIT III-5

- Of the top ten Bureaux listed in Exhibit III-5, ranking by external revenue instead of total sales shows how dramatically rank positions change. The major captive Bureaux drop sharply whereas, the true corporate Bureaux and especially the interactive terminal orientated Bureaux, rise just as dramatically in the rankings.
- The reason for interactive Bureaux rising sharply in terms of ranked external Bureau sales is because they provide low added value to their sales of raw computer time. This means that their revenues are not loaded with the heavy professional staff support costs associated with application package based services (high added value). The lower value added bureaux make their profit from raw computer time.
- Low added value Bureaux include Honeywell, IBM's CALL service and TEAMCO's wholesaling operation. The best example of a high added value Bureau is Hoskyns. The mark up on raw computer time will vary by a factor of two to two and one-half to one depending on the added value content of services.
- Taking all the above factors into account, INPUT's ranking of the major IBM Bureaux is shown in Exhibit III-6.
- These rankings are the best guides at present available. Due to the volatile growth of the Bureau market at the present time, rankings could change a good deal, in 1979 and should be treated with caution. IBM will rise rapidly in the rankings when the Warwick centre is effectively at full strength.

MAJOR IBM BUREAUX - RANKED BY SIZE

External Sales Turnover (T)			
T > £2.5m		£1m > T ≥ £2.5m	
Rank	Company	Rank	Company
1	BOC	8	CARA
2	UCSL	9	Datastream
3	Centrefile	10	Control Data
4	Lowndes-Ajax	11	RHM
5	Compower	12	Hoskyns
6	GEC Midland	13	CEGB
7	IBM	14	Teamco

EXHIBIT III-6

IV. THE UK MARKET FOR IBM BUREAUX

IV. THE U.K. MARKET FOR IBM BUREAUX

A. MARKET SIZE AND GROWTH

- INPUT maintain records on 481 Computer Service Bureaux in the U.K. given the continuous entry of new operators, the consolidation of existing organisations and those dropping out, the records represent approximately 95% of the Bureaux population. The overall market shape is shown in Exhibit IV-1.
- The 68 IBM mainstream Bureaux were classified as primarily Batch, Remote Batch or Comprehensive. Their distribution is shown in Exhibit IV-2.
- INPUT's 1979, forecast for the total computer services market is shown in Exhibit IV-2 together with an estimate of the size of the market for IBM based services. More details of the market for IBM based services appear in Exhibit IV-4.
- INPUT estimate that mainstream Remote Batch Bureaux on average are deriving 10% of their revenues from time sharing interactive work, 25% of their revenues from batch work submitted remotely and 65% from RJE.
- Mainstream Comprehensive Bureaux on average are estimated to be deriving 25% of revenues from interactive time sharing services, 50% from RJE and 25% over the counter batch work.
- The average overall rate of growth of the Bureau Sector appears to be in the region of 27% p.a. in 1979. Direct telephone checks with a number of organisations were made which confirmed this statement.
- The larger Bureaux said that their batch work was becoming a smaller share of their total services. The growth rate of the batch sector is in the region of 15% p.a. currently.

COMPUTER SERVICES MARKET - SUMMARY PROFILE

Service Type	Large		Medium		Small		Total	
	Qty	%	Qty	%	Qty	%	Qty	%
Remote Computer Services Bureau (RCS)	9	1.9	36	7.5	13	2.7	58	12.1
Batch Bureau	1	0.2	35	7.3	89	18.5	125	26.0
Specialist Bureau (Data Prep, OCR COM etc)	-	-	7	1.5	67	13.9	74	15.4
Professional Services (Systems & Software)	9	1.9	47	9.8	168	34.9	224	46.6
TOTALS	19	4.0	125	26.0	337	70.2	481	100.0

EXHIBIT IV-1

FORECAST 1979 REVENUE
DISTRIBUTION BY SERVICE TYPE - IBM BUREAUX

Primary Service	Number of Bureaux	Total Bureau Sales £'m
Batch	44	15.95
Remote Batch	14	12.33
Comprehensive	10	23.49
TOTAL	68	51.81

EXHIBIT IV-2

ESTIMATED IBM BASED BUREAUX SHARE OF 1979
FORECASTS FOR TOTAL COMPUTER SERVICES

	T/S	RJE	Batch	Other	Total
Total UK Computer Services Market Forecast £'m	44.1	45.7	122.3	129.2	341.4
IBM Based Companies	7.1	19.75	24.96	26.4	78.2
IBM Based Share %	16	43	20	20	23

EXHIBIT IV-3

FORECAST 1979 NON-CAPTIVE IBM BASED
BUREAU MARKET BY SERVICE TYPE

Supplier Type	Service	Time Sharing	Remote Batch	Batch	Total
Batch		-	-	15.99	15.99
Remote Batch		1.23	8.01	3.09	12.33
Comprehensive		5.87	11.74	5.88	23.49
Total/£'m		7.10	19.75	24.96	51.81
Distribution %		13.7	38.1	48.2	100.00

Note: Figures embrace the 72 Bureaux listed in Appendix - A.

EXHIBIT IV-4

- It is popularly believed that IBM Based Bureaux are weak in the interactive time sharing market. However, Exhibit IV-5 shows that they have 16% of it.
- The reason for the significance of IBM based time sharing services in spite of a poor interactive product range must be due to the sheer weight of IBM based machine capacity at the larger end of the market.
- The market growth rate for remote computing services (RJE and T/S) is said by Bureaux sampled by telephone to be in the range 35-50% p.a. at present.

B. IBM AS A COMPUTER BUREAU

- The most important announcement likely to affect the Bureau Market is IBM's new RCS Bureau a "Supercentre" at Warwick. Here, there are several large IBM 370/168's already and short term plans exist to install up to six machines of this size (or a machine complex of equivalent capacity). There will be 174,000 square feet of premises and 80 high speed lines giving international network facilities. System 7 minicomputers from IBM's existing product range will operate as network multiplexers. IBM Computers located elsewhere (Croydon, Manchester, Birmingham and London) will be used by IBM and Customers for testing. They are not part of the RCS organisation.
- RCS (Remote Computing Services) is the term increasingly being used to define on-line services which increasingly include both Interactive and Remote Batch Processing features. It appears that software evolution may gradually bring together RJE and Interactive facilities within the same Operating System. For example CDC plan to use their NOS operating system on the CYBER computers for all future remote computing services.
- IBM now offer four main products under the Remote Computing Services category.
 1. CALL
 2. VSPC (Virtual Storage Personal Computing)
 3. VMPS (Virtual Machine Productivity Service)
 4. TBS (Terminal Business Sytem)

MARKET SHARES - ICC & IBM

		T/S	R/B	Batch	Other	Total
IBM	%	16	43	20	20	23
ICL	%	14	15	29	23	23
Other	%	70	42	51	57	54
TOTALS	%	100	100	100	100	100

EXHIBIT IV-5

- CALL is IBM's main RCS product, but it is not available for use by Bureau providers other than IBM, or on end user's machines. This has been a major restriction on persons wishing to develop interactive programs on a bureau basis to run later on in-house IBM machines. Proprietary non-IBM developed alternatives such as ROSCOE exist and larger IBM in-house computers have had IBM's own TSO software available for time-sharing. TSO is not compatible with CALL.
- VSPC is available through IBM's RCS Bureau and to IBM based bureaux and to end users. It is likely to replace CALL as IBM's main time sharing system. COBOL is not available with VSPC. VSPC is supported from IBM's Zoetermeer Centre in Holland (an extension of the Warwick RCS facilities).

VMPS supports COBOL as well as the other VSPC languages (APL, BASIC, FORTRAN and PL/I). VMPS uses the security and versatility of the virtual machine operating system philosophy to provide a vehicle for IBM licensed program products. It is only suitable for mainframes with sufficient power to bear the overhead cost of running VM. VMPS is supported on a 370/158 based at IBM's Croydon Centre which is used for customer testing.

- TBS is primarily a remote batch processing system, but it does have conversational features. It offers a standard range of order entry, general accounting, invoicing and stock control packages on an RCS basis from IBM's Warwick Computer Centre.

C. IBM AS A SUPPORTER OF BUREAU EQUIPMENT

- IBM UK Ltd., has a Country Manager responsible for sales of DP products. Within this structure there are regions to cover particular territories and branches which specialise in particular sectors of the market (e.g. Banking & Finance).

- In addition to the Branch and Regional set up, there is a specialist group "Data Services Branch" which is responsible for DP hardware sales to Computer Bureaux, for dealing with leasing companies, PCM (Plug Compatible Mainframe) vendors and educational establishments.
- The managers of Data Services Branch (Bill Quain) and RCS (Michael Mylcreest) both report to the DP Division Country Manager (David Livermore) who reports to the DP Division Director (Tony Cleaver).
- IBM claims that the Data Services Branch has very little to do with the RCS organisation. Certainly, the manager of the Data Services Branch knew very little about RCS equipment and the RCS organisation.
- For Bureaux with IBM hardware, there are of course available all of IBM's existing program products. However, the CALL service marketed by RCS is a proprietary product not available to IBM's DP customers.
- IBM's DP account customers cannot develop programs on the RCS CALL facility and then bring them in-house since this CALL software is not available to them. This is a serious limitation which will be overcome by IBM's VSPC (Virtual Storage Personal Computing) alternative to CALL.
- For IBM Bureau customers of DP Division, the VM testing facilities at Croydon, Birmingham, Manchester and Greenford are available.
- The Data Services Branch will increasingly be involved in the supply and support of program products to PCM bureaux.

D. IMPACT OF NEW IBM ANNOUNCEMENTS

- The installed IBM and PCM equipment base among 72 Bureaux listed in Appendix - C is analysed in Exhibit IV-6.

IBM COMPATIBLE BUREAU EQUIPMENT

	Hardware Size			Total
	Large	Medium	Small	
PCM	5	1	-	6
370 Series	29	10	2	41
360 Series	10	8	9	27
303X Series	7	-	-	7
GSD Products	-	7	32	39
TOTALS	51	26	43	20

Note: PCM = Plug Compatible Mainframe

EXHIBIT IV-6

- The mainframe population is of course constantly changing. The most surprising feature of the installed base at the moment is perhaps the fact that 22% of the installed base is still 360 series equipment. Also, there is a large number of small machines (e.g. IBM System 32, System 34, System 3) installed in Bureaux.
- Exhibit IV-7 shows that IBM has moved onto a whole new price performance curve with its 4300 series equipment, which at the top end (4341) could damage prospects for the 303X series if sold in multiple configurations at central sites.
- The 4331 has a reported MIP rate of up to 1.3 times the 370/135. It therefore replaces and obsoletes the 370 models 115-2 and 125-2 and their earlier versions.
- The 4341 has a quoted MIP rate of 1.7 times that of the 370/148. It has some three times the power of the 370/138 which it therefore obsoletes together with the 370/148.
- The 4300 Series aims to consolidate further IBM's move towards fixed disc technology. The two main products for the 4300 Series are:-
 - 3310 with 64.5 Mb (4331 only)
 - 3370 with 570 Mb (4331 and 4341)
- First shipments of the 4341 are due in the first quarter of 1980.
- Of the PCM suppliers, only Itel and Amdahl are of real significance in the U.K.
- Amdahl machines are above the 4300 Series in power and therefore not likely to be impacted significantly by it. Amdahl must fight it out with IBM in the 303X market.
- Itel are in a relatively strong position to resist the 4300 series challenge by IBM because:

- the business is not entirely dependent on PCM sales
 - its chief strength as a PCM lies just above the 4341 level i.e. in the 'hole' between it and the vulnerable 3031.
 - its policy of offering a complete system permits a full comparison with IBM's all in prices (including software and support.)
- IBM's prices for its new 64k chip memory on the 4300 series are \$20,000 per megabyte. This price drop will severely hit several of the less well known PCM's (Magnuson, National Semiconductor, Two Pi, IPL Systems, Cambridge Memories, Nanodata, Kardios, Citel).
 - The IBM 8100 series leaves off where the IBM 4331 begins and is limited to a memory size of $\frac{1}{2}$ Mb. This product is not likely to be of much significance to the Bureau market except as a replacement for IBM 3790 communications processors and special purpose data entry systems.
 - The IBM Series 1 minicomputer has been a great disappointment so far to the software houses who have found it difficult to use due to the poor quality of its basic software. It has also been supported totally inadequately in Europe.
 - The new 8100 being marketed by DPD and overlapping the Series 1 in price and capability is likely to be used in preference to the Series 1 for remote intelligent on-site processors where, significant mainframe access and processing is needed. IBM's integrated DPD marketing of 8100's and mainframes together with their present technical support strength will combine to keep IBM's GSD people at arms length from Users unless and until the Series 1 becomes popular as a distributed processing system in its own right.
 - The IBM System 38 is the next logical machine choice for the large number of System 3, 32 and 34 based Bureaux. A number of Bureaux said that this was their next intended machine.

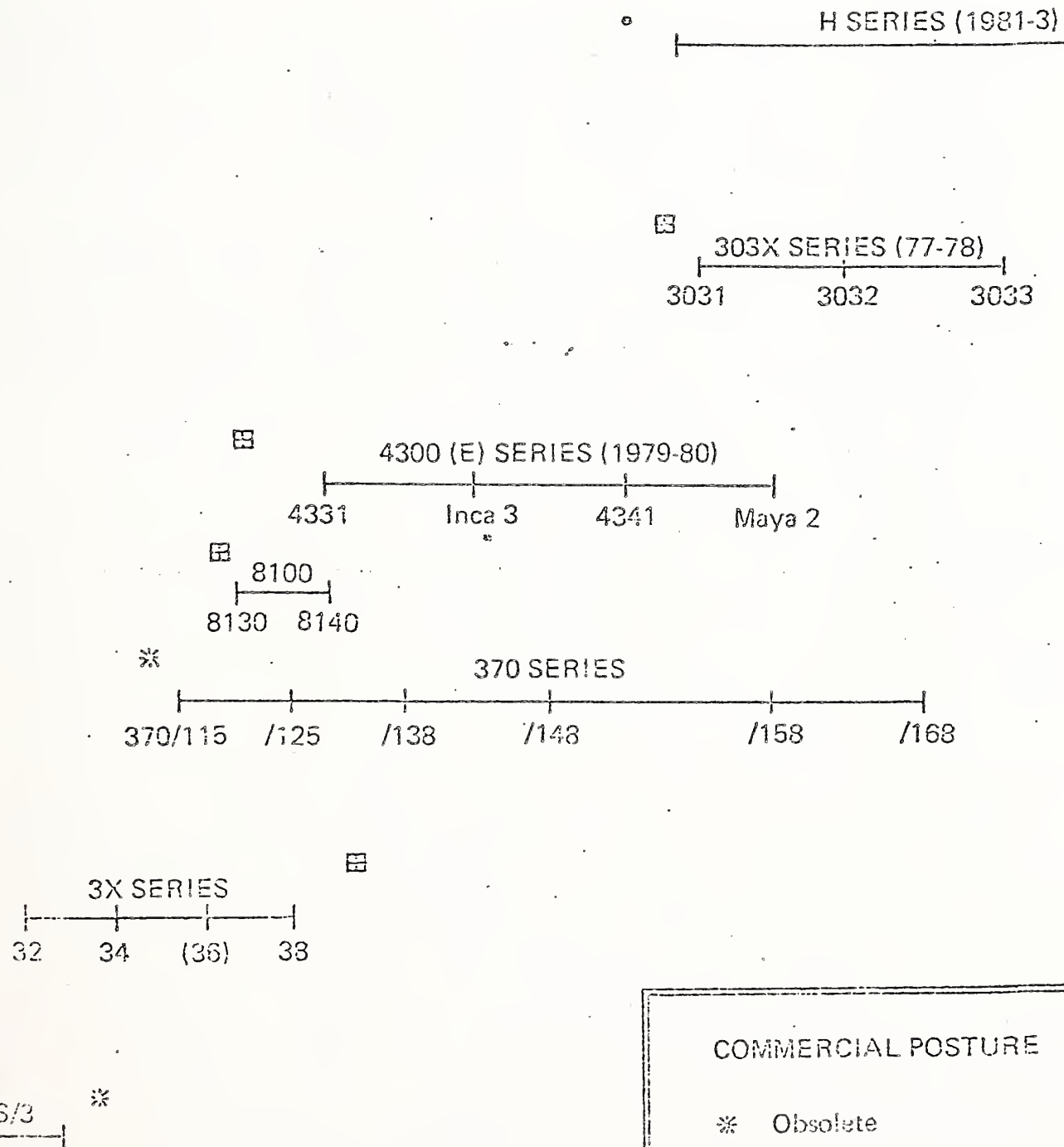
- The price per MIP on the 4300 series is 40 to 50% lower than on the 3030 series machines and this is causing many uncommitted 3030 series prospects with large IBM mainframes to re-think their plans. The problem however is that while the 3030 series equipment is available now, the model 4341 will not be available until 1980 for most potential customers.
- Amdahl and Itel are well placed to displace successfully a number of large 370's, in the next two years into early 1981. This may well result in large second user 370 series machines going into the medium end of the Bureau market who will be looking for the most cost effective hardware deals available.
- IBM continue to be vulnerable due to long delivery times and their policy of refusing to quote delivery dates with orders.
- The top end of IBM's new product line, the H series, is not likely to become significantly available until 1982.
- The IBM product continuum is shown as Exhibit IV-7.

E. TRENDS AND MARKET OPPORTUNITIES

- The market for Bureau services is very buoyant with growth averaging 27% p.a. at present according to INPUT's forecasts.
- In the professional services sector, the new 4300 series represents a major market opportunity since IBM will be unable to provide the level of free technical support experienced with the 370 series. This is due to the falling value of hardware revenues as the machine population increases.
- At the top end of the market, IBM still offers poor interactive program products by comparison with the Specialist Interactive Bureaux. IBM's Price performance on the 370 series is also nothing like as good as that offered by Specialists, except where large database storage is involved.

- The interactive market is vulnerable to the key distributed minicomputer equipment vendors (DEC, Hewlett Packard Honeywell, Data General etc). Increasingly, companies spending sums of £40,000 p.a. or more will be considering setting up their own in-house special purpose time sharing bureaux. Nevertheless the market as a whole for interactive services is expected to grow much more rapidly than it is for batch services.
- INPUT forecasts a continuing strong demand for both interactive dedicated installations in-house, and for on-line services via Computer Bureaux.
- The introduction of packet switching network facilities in the UK will in the 80's will give a strong boost to a new market for low end time sharing users on a more widespread geographical base. This will be due to the removal of charges based on line distances.
- Time sharing users such as Honeywell with large investments in special network hardware may find it difficult to take advantage of packet switching initially.
- A Bureau time wholesaler TEAMCO has emerged during this study. Teamco obviously found marketing its services directly in the UK a serious problem. However TEAMCO have shown that there is an opportunity to displace obsolete mainframes run by smaller Bureaux and provide them with computer power on a wholesale basis.
- The demand by small businesses for point of sale data capture, interactive order processing and accounting will continue to be the major market opportunity. The retail, wholesale and distribution sectors of the market offer prime opportunities for both vendors of Bureau services and dedicated computers based on packages. Intelligent terminals linked on-line to mainframes to service this opportunity will be a growth area.

THE IBM PRODUCT CONTINUUM



COMMERCIAL POSTURE

- * Obsolete
- ⊠ Current
- o New Announcements

EXHIBIT IV-7

- The achilles heel of distributed system vendors is post implementation software and system maintenance. The on-line RCS vendors can offer a more credible solution to this need in the marketplace, but they are failing conspicuously to exploit this weakness in distributed processing philosophy.
- Users of small distributed systems will need access to regional software maintenance services. A market opportunity exists to set up with equity participation by Users, specialist regional centres to maintain distributed processing software.
- If software maintenance for distributed systems is not organised more effectively in the 1980's there could be a User driven backlash away from distributed processing in favour of on-line utilities capable of providing effective application system maintenance.

APPENDICES

APPENDIX - A

IBM BUREAUX SALES REVENUE ESTIMATES

APPENDIX - A

IBM BUREAUX SALES REVENUE ESTIMATES

APPENDIX - A: NOTES

1. SALES TURNOVER CATEGORIES

The following table indicates the bounds for sales turnover classification.
Total Bureau sales are the basis of classifications.

TURNOVER RANGE BUREAU ONLY

REF	RANGE
A	0 \leq T < £ $\frac{1}{4}$ m
B	£ $\frac{1}{4}$ m \leq T < £ $\frac{1}{2}$ m
C	£ $\frac{1}{2}$ m \leq T < £ 1m
D	£ 1m \leq T < £ 1.5m
E	£1.5m \leq T < £ 2.5m
F	£2.5m \leq T < £ 4.0m
G	£4.0m \leq T < £ 6.5m
H	£6.5m \leq T < £ 8.5m
I	£8.5m \leq T < £10.0m
J	£ 10m \leq T < £15.0m
K	£ 15m or more

Given figures are appended "G" and Estimates "E".

2. MACHINE CAPACITY

Computers have been classified into eleven size categories as follows:

CATEGORY	CAPACITY
1	Micro
2	Tiny
3	Very Small
4	Small
5	Medium Small
6	Medium
7	Medium Large
8	Large
9	Very Large
10	Superscale
11	Giant

UK COMPUTER BUREAU REVENUES - IBM SECTOR

ESTIMATED SALES 1979 £'m

COMPANY	SALES	TOTAL SALES	TOTAL BUREAU SALES	TOTAL BUREAU IBM ONLY	IBM SHARE %	EXTERNAL SALES %	IBM £'m	SIZE	AREA	OWNERSHIP	TYPE
AGB COMPUTER		4.00	1.75	1.00	57	20	.20	S	NH	C	B
AMBA		.06	.01	.01	100	100	.01	S	SH	P	R
ANGLIA		.80	.32	.32	100	50	.16	S	A	C	B
ASTRAL		.48	.25	.25	100	100	.25	S	L	C	B
AUTO SERVICES		.30	.15	.15	100	50	.08	S	SH	C	B
BARBICAN		.35	.17	.17	100	80	.14	S	L	C	B
BLUE CIRCLE		2.50	1.50	1.50	100	15	.22	S	L	C	R
BOC		15.00	12.80	8.53	67	67	5.68	L	SH	C	C
BOEING		2.70	1.60	.30	19	100	.30	M	NH	C	C
BROWNBILL		.30	.05	.05	100	100	.05	S	N	P	B
BURY		.20	.08	.08	100	100	.08	S	A	C	B
CARA		5.25	4.75	4.50	95	50	2.25	M	I	C	R
CENTREFILE		9.50	6.10	3.00	49	100	3.00	L	L	O	C
CONTROL DATA		6.25	3.95	1.95	25	90	1.75	M	L	O	C
CEGB		10.50	8.00	7.00	87	28	1.40	M	L	C	C

UK COMPUTER BUREAU REVENUES - IBM SECTOR

ESTIMATED SALES 1979 £'m

COMPANY	SALES	TOTAL SALES	TOTAL BUREAU SALES			IBM SHARE %	EXTERNAL SALES		IBM £'m	SIZE	AREA	OWNERSHIP	TYPE
			SALES	BUREAU IBM ONLY			%	%					
COMPOWER		16.00	11.00	7.10		64		40	2.84	L	M	C	C
COMPUTIME		.15	.10	.10		100		100	.10	S	I	P	B
CRL		1.00	.65	.60		99		100	0.60	L	L	O	R
CSS		.50	.40	.40		100		100	.40	S	L	O	R
CYPHER		.24	.13	.02		15		75	.01	S	N	C	B
DATA COMPUTING		.80	.02	.02		100		100	.02	S	SH	O	B
DATA LINK		.60	.50	.50		100		100	.50	S	SH	O	B
DATA PUNCH		.65	.50	.50		100		100	.50	S	SC	P	B
DATA SERVICES		.11	.10	.10		100		100	.10	S	I	P	B
DATASTREAM		3.50	2.00	2.00		100		100	2.00	M	L	C	C
DATA TRANSFER		.85	.75	.75		100		100	.75	S	SH	O	R

UK COMPUTER BUREAU REVENUES - IBM SECTOR

ESTIMATED SALES 1979 £'m

COMPANY	SALES	TOTAL SALES	TOTAL BUREAU SALES	TOTAL BUREAU IBM ONLY	IBM SHARE %	EXTERNAL SALES %	IBM £'m	SIZE	AREA	OWNERSHIP	TYPE
DELTA		.25	.20	.20	100	100	.20	S	L	P	R
DENCO		.10	.20	.20	100	100	.20	S	W	O	B
DONOVAN		.40	.30	.30	100	100	.30	S	L	P	B
EASTERN C.S.	1.00		.64	.64	100	80	.51	S	A	C	B
EJV DATA SERVICES	.30		.25	.25	100	65	.16	S	L	C	B
EXTEL	1.50		1.00	1.00	100	90	.90	M	L	O	B
FOSSE	.20		.18	.18	100	100	.18	S	M	P	B
GEC MIDLAND	11.30		8.50	7.50	10	35	2.6	L	M	C	C
GMS COMPUTING	1.20		.91	.60	66	30	.18	S	N	C	B
GOR RAY	.22		.15	.12	80	100	.12	S	NH	C	B
GRIP	6.20		4.00	4.00	100	15	.60	M	NH	C	R
GROVE	.90		.80	.80	100	100	.80	M	L	O	B
HADRIAN	.68		.25	.10	40	40	.04	S	N	C	B
HALLMARK	.17		.10	.08	80	40	.03	S	SH	C	B
HOSKYNES	12.00		5.30	1.80	34	90	1.62	L	L	O	B
IBM	15.00		15.00	15.00	100	15	2.25	L	L	O	R

UK COMPUTER BUREAU REVENUES - IBM SECTOR

ESTIMATED SALES 1979 £'m												
COMPANY	SALES	TOTAL SALES	TOTAL BUREAU SALES		IBM ONLY	IBM SHARE %	EXTERNAL SALES %	IBM £'m	SIZE	AREA	OWNERSHIP	TYPE
			TOTAL SALES	IBM								
JASERVE		2.00	1.30	1.30		100	60	.78	M	S	O	B
JB'S		.07	.02	.02		100	100	.02	S	M	O	B
KERR		1.00	.80	.80		100	100	.80	M	SC	O	B
LAINC		2.90	1.80	1.80		100	40	.72	M	NH	C	B
LOWNDES-AJAX		4.00	3.00	3.00		100	100	3.00	M	SH	O	B
MANIF		.45	.25	.25		10	20	.05	S	W	C	B
McCONNELLS		.10	.08	.08		100	50	.04	S	I	C	B
MPL		.50	.30	.30		100	100	.30	S	W	O	B
DOUGLAS MOORE		2.50	1.55	.20		13	100	.20	M	L	O	B
NDPS		29.00	29.00	2.25		8	15	.34	S	L	C	C
ORWELL		.23	.17	.17		100	30	.05	S	A	O	B

UK COMPUTER BUREAU REVENUES - IBM SECTOR

ESTIMATED SALES 1979 £'m

COMPANY	SALES	TOTAL SALES	TOTAL BUREAU SALES	TOTAL BUREAU IBM ONLY	IBM SHARE %	EXTERNAL SALES %	IBM £'m	SIZE	AREA	OWNERSHIP	TYPE
OSPREY		.22	.05	.05	100	100	.05	S	S	O	B
RHM COMPUTING		5.90	3.30	3.30	100	50	1.65	M	NH	C	R
ROSS		.50	.45	.45	100	50	.23	S	W	C	B
RTZ		1.20	.90	.80	89	60	.48	M	W	C	C
SCHRODER		1.80	1.00	1.00	100	80	.80	M	W	C	R
IP SHARP		1.50	.80	.80	100	100	.80	M	L	O	R
SOUTHWARK		.90	.60	.40	67	20	.08	S	L	C	C
STAR		.70	.30	.30	100	100	.30	S	L	O	B
STUDLEY		.10	.05	.05	100	100	.05	S	M	O	B
SUN ALLIANCE		5.00	3.00	3.00	100	15	.45	S	M	C	B
SYS CONSULTANTS		1.00	.80	.80	100	100	.80	M	SC	O	R
TARGET		.70	.35	.25	71	100	.25	S	L	O	B
TEAMCO		1.00	1.00	1.00	100	100	1.00	S	L	O	R

UK COMPUTER BUREAU REVENUES - IBM SECTOR

ESTIMATED SALES 1979 £'m

COMPANY	SALES	TOTAL SALES	TOTAL BUREAU SALES	TOTAL IBM ONLY	IBM SHARE %	EXTERNAL SALES %	IBM £'m	SIZE	AREA	OWNERSHIP	TYPE
TELFORD		.26	.16	.16	100	100	.16	S	W	O	B
THI		.90	.40	.40	100	40	.16	S	SH	C	B
TYLIN		1.90	1.00	1.00	100	40	.40	S	L	C	B
UCSL		13.00	8.00	7.55	100	40	3.02	L	L	C	C
WELLORAX		.70	.30	.30	100	100	.30	S	L	O	B
XCALIBUR		.75	.60	.60	100	75	.45	S	L	C	B
TOTALS INCLUDING MIXED IBM/ICL BUREAU		212.09	156.74	105.3	68	-	51.81				
DEDUCT MAIN ICL BUREAUX											
Boeing	2.70		1.60	.30			.30				
Hadrian	.68		.25	.10			.04				
Doug M.	2.5		1.55	.20			.20				
ND PS	29.0		29.00	2.25			.34				
TOTALS EXCLUDING MAIN ICL BUREAUX		177.21	124.34	102.45			50.93				

APPENDIX - B

QUESTIONNAIRES

COMPUTER BUREAU SUMMARY				Ref. 14
Company AGB COMPUTER SERVICES				
Parent Company AGB				
Headquarters Town		Eastcote	Area:	London West
Telephone Number		868 4422		
Contact Name		Title:		
Managing Director		Alan Daks Computer Operations Director		
Base Year	<div style="border: 1px solid black; padding: 2px;">1979</div>		Total Group Sales	<div style="border: 1px solid black; padding: 2px;">£4.0 M</div>
Employment Total	<div style="border: 1px solid black; padding: 2px;">250</div>		Total Bureau Sales	<div style="border: 1px solid black; padding: 2px;">£1.75 M</div>
Ops/Data	<div style="border: 1px solid black; padding: 2px;"></div>		Bureau IBM Sales	<div style="border: 1px solid black; padding: 2px;">£1.00 M</div>
Dev.	<div style="border: 1px solid black; padding: 2px;"></div>		Bureau Other Sales	<div style="border: 1px solid black; padding: 2px;">£0.75 M</div>
Other	<div style="border: 1px solid black; padding: 2px;"></div>			
Growth Rate % p.a.	<div style="border: 1px solid black; padding: 2px;">20</div>			
Geographical Category	<div style="border: 1px solid black; padding: 2px;">NH</div>		Sales Turnover Category	<div style="border: 1px solid black; padding: 2px;">E</div>

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
H 3200	6		£0.75 M	£0.75 M	
IBM 360/50	7		£1.00 M	£1.00 M	
TOTALS	X			1.75	

<p>Bureau Type</p> <p>Batch <input checked="" type="checkbox"/></p> <p>RCS <input type="checkbox"/></p> <p>Comprehensive <input type="checkbox"/></p> <p>Data Prep. <input type="checkbox"/></p> <p>Tick One Box Only</p>	<p>Specialties</p> <p>Retail Store Audits</p> <p>TV Audience Research</p> <p>Market Research</p> <p>.....</p> <p>.....</p>
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General Comments

COMPUTER BUREAU SUMMARY

Ref.
30

Company

AMBA SOFTWARE

Parent Company

Headquarters Town

Maidenhead

Area:

Berks

Telephone Number

0628 28722

Contact Name

P M Bradley

Title:

-

Managing Director

Base Year

1979

Total
Group
Sales

£60,000

E

Employment Total

4

Total
Bureau
Sales

£10,000

E

Ops/Data

Dev.

Other

Bureau
IBM
Sales

£10,000

E

Growth Rate % p.a.

20

Bureau
Other
Sales

-

Geographical Category

SH

Sales Turnover Category

A

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM SI	4	1		10,000	
TOTALS	X	1		10,000	

Bureau Type

Batch

☐

RCS

☒

Comprehensive

☐

Data Prep.

☐

Tick One Box Only

Specialties

Software Development

.....

..Time Hire..Sl.....

..Comms..Software.....

.....

.....

General Comments

COMPUTER BUREAU SUMMARY

Ref.
33

Company

ANGLIA DATA SERVICES

Parent Company

UCSL

Headquarters Town

Norwich

Area: Norfolk

Telephone Number

0603-60655

Contact Name

J Fendick

Title:

Sales Manager

Managing Director

Base Year

1979

Total
Group
Sales

£800,000

Employment Total

65

Total
Bureau
Sales

£320,000

Ops/Data

27

Dev.

30

Bureau
IBM
Sales

£320,000

Other

8

Growth Rate % p.a.

Bureau
Other
Sales

-

Geographical Category

A

Sales Turnover Category

B

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
360/30	3	1	120,000	120,000	Expecting to instal IBM 4300 next year or go on-line to UCSL at watford in place of 360 main frames
360/40	5	1	200,000	200,000	
TOTALS	X			320,000	

Bureau Type

Batch



RCS



Comprehensive



Data Prep.



Tick One Box Only

Specialties

Accounting & business Planning
All USL Products.....
.....
.....
.....

General Comments

Bulk of Sales 95% are to Unilever Companies

COMPUTER BUREAU SUMMARY

Ref.
44

Company

Astral Computer Services Ltd.

Parent Company

Fitcher Head & Gilberts

Headquarters Town

London

Area:

City

Telephone Number

236 8326

Contact Name

A R Lynch

Title: Gen. Mgr.

Managing Director

Base Year

1979

Total
Group
Sales

£480,000

Employment Total

29

Total
Bureau
Sales

£250,000

Ops/Data

16

Dev.

Bureau
IBM
Sales

£250,000

Other

Growth Rate % p.a.

20

Bureau
Other
Sales

-

Geographical Category

L

Sales Turnover Category

B

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
370/115-2	4	1	250,000	250,000	No plans to change
TOTALS	X			250,000	

Bureau Type

× Batch



RCS



Comprehensive



Data Prep.



Tick One Box Only

Specialties

Insurance, Banking, Accounting

Membership Records

General Comments

COMPUTER BUREAU SUMMARY

Ref.
50

Company
AUTOMATION SERVICES

Parent Company
HALLMARK ASSOCIATES

Headquarters Town
WOKING Area: SURREY

Telephone Number
04862-64611

Contact Name
D. Honeywood Title: Director

Managing Director

Base Year

1979

Total
Group
Sales

£300,000

Employment Total

20

Total
Bureau
Sales

£150,000

Ops/Data

Dev.

Other

Bureau
IBM
Sales

£150,000

Growth Rate % p.a.

Bureau
Other
Sales

-

Geographical Category

SH

Sales Turnover Category

A

Machines

C
A
T

Qty

Est'd
Revenue
Each

Est'd
Total
Revenue

Geography/Plans

IBM 360/30

3

1

150,000

150,000

TOTALS

X

150,000

Bureau Type

Batch

RCS

Comprehensive

Data Prep.

☒
☐
☐
☐

Specialties

Manufacturing Costs

Inventory Control

Production Control

Tick One Box Only

General Comments

COMPUTER BUREAU SUMMARY

Ref.
54

Company

Barbican Computer Services Ltd

Parent Company

Robson Rhodes (Accountants)

Headquarters Town

London

Area:

City

Telephone Number

251 4877

Contact Name

H J Hutton

Title:

Ops Manager

Managing Director

A V Squirrel

Base Year

1979

Total
Group
Sales

£350,000

Employment Total

25

Total
Bureau
Sales

£175,000

Ops/Data

11

Dev.

Bureau
IBM
Sales

£175,000

Other

Growth Rate % p.a.

23

Bureau
Other
Sales

Geographical Category

L

Sales Turnover Category

H

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM Sys 3/12	3	1	125,000	125,000	Replacing System 3/12 with IBM System 38 in 1979
Sys 32	2	1	150,000	50,000	
TOTALS	X			175,000	

Bureau Type

Batch



RCS



Comprehensive



Data Prep.



Tick One Box Only

Specialties

Soft Drinks

Timber

Construction

Finance

Banking

General Accounting

General Comments

COMPUTER BUREAU SUMMARY

Ref. 67

Company

Blue Circle Industries Ltd

Parent Company

Blue Circle

Headquarters Town

London

Area:

Central

Telephone Number

828 3456 x 120

Contact Name

Mr Huntley

Title:

Managing Director

Base Year

1979

Total Group Sales

£2.5 M

E

Employment Total

130

Total Bureau Sales

£1.5 M

E

Ops/Data

Dev.

Other

Bureau IBM Sales

£1.5 M

E

Growth Rate % p.a.

50

Bureau Other Sales

£0.250

E

Geographical Category

L

Sales Turnover Category

E

Machines

C
A
T

Qty

Est'd Revenue Each

Est'd Total Revenue

Geography/Plans

IBM 370/158

8

1

£1.5 M

£1.5 M

No plans change but plans to upgrade to MVS & 4MB. Can support up to 20 users on-line with TSO

TOTALS

X

£1.5 M

Bureau Type

Batch

RCS

Comprehensive

Data Prep.

☐
☒
☐
☐

Specialties

L P Transport Simulation

Geological

Engineering ICES

Pert

Corporate Modelling

Tick One Box Only

General Comments

COMPUTER BUREAU SUMMARY		Ref. 68
Company B O C Datasolve		
Parent Company B O C		
Headquarters Town	Sunbury	Area: S W London
Telephone Number	76 - 85566	
Contact Name	Nielsen Kite	Title: Public Relations Manager
Managing Director		

Base Year	1979	Total Group Sales	£15.00 M E
Employment Total	800	Total Bureau Sales	£12.80 M G
Ops/Data		Bureau IBM Sales	£ 8.53 M G
Dev.		Bureau Other Sales	£ 4.27 M G
Other			
Growth Rate % p.a.	50		
Geographical Category	SH	Sales Turnover Category	J

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 370/158	8	2	£2.00	£4.00	Will not Disclose
Andahl 470V6	9	1	£2.50	£2.50	
IBM 360/50	7	1	£1.00	£1.00	
IBM 360/40	5	2	£0.4	£0.80	
ICL 2970	8	1	£1.50	£1.50	
ICL 1904A	7	2	£ .90	£1.80	
ICL 1902	4	3	£ .40	£1.20	
TOTALS	X	12		£12.80	

<p>Bureau Type</p> <p>Batch <input type="checkbox"/></p> <p>RCS <input checked="" type="checkbox"/></p> <p>Comprehensive <input type="checkbox"/></p> <p>Data Prep. <input type="checkbox"/></p> <p>Tick One Box Only</p>	<p>Specialties</p> <p>Network Planning</p> <p>Micrographics</p> <p>Mailing</p> <p>APL Program Development</p> <p>General Accounting</p>
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General Comments

COMPUTER BUREAU SUMMARY		Ref. 696
Company Boeing Computer Centres Ltd - Commercial		
Parent Company Boeing		
Headquarters Town	Watford	Area: Herts
Telephone Number 0923 38321		
Contact Name Commercial - Hughes Title: Marketing Executive		
Managing Director		

Base Year	1979	Total Group Sales	£2.30 M	E
Employment Total	130	Total Bureau Sales	£1.30 M	E
Ops/Data		Bureau IBM Sales		
Dev.		Bureau Other Sales	£1.30 M	E
Other				
Growth Rate % p.a.	100			
Geographical Category	NH	Sales Turnover Category	E	

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
ICL 1904	7	1	1.00	1.00	B x 370/168 in USA But none in UK only RJE Link
Prime 400	5	1	.20	.20	
GCS 2100	1	1	.10	.10	
TOTALS	X	3		1.30	

<p>Bureau Type</p> <p>Batch <input checked="" type="checkbox"/></p> <p>RCS <input type="checkbox"/></p> <p>Comprehensive <input type="checkbox"/></p> <p>Data Prep. <input type="checkbox"/></p> <p>Tick One Box Only</p>	<p>Specialties</p> <p>Payroll</p> <p>Interactive Accounting</p> <p>Batch Accounting</p> <p>Address Mailing</p> <p>Subscription Accounting</p>
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General Comments

COMPUTER BUREAU SUMMARY					Ref. 69
Company Boeing Computer Centres Ltd - Mainstream					
Parent Company		Boeing			
Headquarters Town		Watford	Area:		Herts
Telephone Number		0923 38321			
Contact Name		Mr. Booth	Title:		
Managing Director					
Base Year		1979		Total Group Sales	£400,000 E
Employment Total		20		Total Bureau Sales	£300,000 E
		Ops/Data			
		Dev.		Bureau IBM Sales	£300,000 E
		Other	40		
Growth Rate % p.a.				Bureau Other Sales	- E
Geographical Category			NH	Sales Turnover Category B	

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
RJE Terminals		20 Est	15,000 each	300,000	2 x 9600 baud lines to USA and 1 x 370/168 and 2 x IBM 30335. Allowing say 300 baud per terminal gives capacity of 30 terminals.
TOTALS	X			300,000	

<p>Bureau Type</p> <p>Batch <input type="checkbox"/></p> <p>RCS <input checked="" type="checkbox"/></p> <p>Comprehensive <input type="checkbox"/></p> <p>Data Prep. <input type="checkbox"/></p> <p>Tick One Box Only</p>	<p>Specialties</p> <p>APL Programming</p> <p>Financial Modelling</p> <p>.....</p> <p>.....</p> <p>.....</p>
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General Comments

COMPUTER BUREAU SUMMARY

Ref.
14

Company
G H Brownbill Ltd

Parent Company

Headquarters Town
Warrington Area: Lancs

Telephone Number
092 576 4111

Contact Name Title:

Managing Director

Base Year

1979

Total
Group
Sales

£300,000

E

Employment Total

20

Total
Bureau
Sales

£ 50,000

E

Ops/Data

Dev.

Other

Bureau
IBM
Sales

£ 50,000

E

Growth Rate % p.a.

Bureau
Other
Sales

-

Geographical Category

N

Sales Turnover Category

A

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM Sys 34	2	1	50,000	50,000	
TOTALS	X				

Bureau Type

Batch



RCS



Comprehensive



Data Prep.



Tick One Box Only

Specialties

General Accounting

Data Preparation

General Comments

COMPUTER BUREAU SUMMARY				Ref. 79																																			
Company Bury Computer Services																																							
Parent Company Rubicon Computer Systems Ltd																																							
Headquarters Town		Area:																																					
Bury St Edmunds		Suffolk																																					
Telephone Number 0284 66155																																							
Contact Name		Title:																																					
M D Sleet		Sales Director																																					
Managing Director																																							
<table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">Base Year</td> <td style="width: 10%; border: 1px solid black; text-align: center;">1979</td> <td style="width: 20%;">Total Group Sales</td> <td style="width: 10%; border: 1px solid black; text-align: center;">£200,000</td> <td style="width: 10%; border: 1px solid black; text-align: center;">E</td> </tr> <tr> <td>Employment Total</td> <td style="border: 1px solid black; text-align: center;">16</td> <td>Total Bureau Sales</td> <td style="border: 1px solid black; text-align: center;">£ 80,000</td> <td style="border: 1px solid black; text-align: center;">E</td> </tr> <tr> <td>Ops/Data</td> <td style="border: 1px solid black; text-align: center;">13</td> <td>Bureau IBM Sales</td> <td style="border: 1px solid black; text-align: center;">£ 80,000</td> <td style="border: 1px solid black; text-align: center;">E</td> </tr> <tr> <td>Dev.</td> <td style="border: 1px solid black; text-align: center;"></td> <td>Bureau Other Sales</td> <td colspan="2" style="border: 1px solid black; text-align: center;"></td> </tr> <tr> <td>Other</td> <td style="border: 1px solid black; text-align: center;"></td> <td colspan="3"></td> </tr> <tr> <td>Growth Rate % p.a.</td> <td style="border: 1px solid black; text-align: center;"></td> <td colspan="3"></td> </tr> <tr> <td>Geographical Category</td> <td style="border: 1px solid black; text-align: center;">A</td> <td colspan="2">Sales Turnover Category</td> <td style="border: 1px solid black; text-align: center;">A</td> </tr> </table>					Base Year	1979	Total Group Sales	£200,000	E	Employment Total	16	Total Bureau Sales	£ 80,000	E	Ops/Data	13	Bureau IBM Sales	£ 80,000	E	Dev.		Bureau Other Sales			Other					Growth Rate % p.a.					Geographical Category	A	Sales Turnover Category		A
Base Year	1979	Total Group Sales	£200,000	E																																			
Employment Total	16	Total Bureau Sales	£ 80,000	E																																			
Ops/Data	13	Bureau IBM Sales	£ 80,000	E																																			
Dev.		Bureau Other Sales																																					
Other																																							
Growth Rate % p.a.																																							
Geographical Category	A	Sales Turnover Category		A																																			
Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans																																		
IBM Sys 34	2	1		50,000																																			
IBM Sys 32	2	2		20,000																																			
Cincinetti } Milacron }		1		10,000																																			
TOTALS	X			80,000																																			
Bureau Type			Specialties																																				
Batch <input checked="" type="checkbox"/>			Production Control																																				
RCS <input type="checkbox"/>			Bill of Materials																																				
Comprehensive <input type="checkbox"/>			Parts Distribution																																				
Data Prep. <input type="checkbox"/>			Financial Accounting																																				
Tick One Box Only																																						
General Comments																																							

COMPUTER BUREAU SUMMARY

Ref.
E1

Company
Cara Data Processing Ltd

Parent Company
Aer Lingus

Headquarters Town Dublin Area: Eire

Telephone Number 0001 783166

Contact Name D A McMahon Title: Sales Manager

Managing Director
D J Beham

Base Year	<div>1979</div>	Total Group Sales	<div>£5.25 M</div>
Employment Total	<div>120</div>	Total Bureau Sales	<div>£4.75 M</div>
Ops/Data	<div>25</div>	Bureau IBM Sales	<div>£4.5 M</div>
Dev.	<div>35</div>	Bureau Other Sales	<div>£0.25 M</div>
Other	<div>60</div>		
Growth Rate % p.a.	<div>20</div>		
Geographical Category	<div>I</div>	Sales Turnover Category	<div>G</div>

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
360/65	8	2	1,250,000	2,500,000	
360/50	7	2	1,000,000	2,000,000	
H 125	3	1	150,000	150,000	
H 115	2	1	100,000	100,000	
TOTALS	X	6		4,750,000	

Bureau Type

Batch ☐

RCS ☒

Comprehensive ☐

Data Prep. ☐

Tick One Box Only

Specialties

Accounting

Mining Industry

Airline Reservations

Hotel Reservations

.....

General Comments

Only 50% of CARA's sales are estimated to be external
thus Bureau revenues are likely to be in the region of
£2.25 M

COMPUTER BUREAU SUMMARY

Ref.
94

Company

Centrefile Ltd

Parent Company

National Westminster Bank Ltd.

Headquarters Town

London

Area:

City

Telephone Number

405 8700

Contact Name

Title:

Managing Director

Base Year

1979

Total
Group
Sales

£9.5 M

E

Employment Total

380

Total
Bureau
Sales

£6.85 M

E

Ops/Data

30

Dev.

38

Bureau
IBM
Sales

£3.75 M

E

Other

Growth Rate % p.a.

Bureau
Other
Sales

£3.1 M

E

Geographical Category

L

Sales Turnover Category

H

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 370/155	7	3	1.25	3.75	
PDP 11	3	6	.50	.50	
1904 A	7	1	.90	.90	
H 3200	6	1	.70	.70	
H 1250	6	1	.60	.60	
H 6400	4	2	.20	.40	
TOTALS	X	14		6.85	

Bureau Type

Batch

☐

RCS

☐

Comprehensive

☒

Data Prep.

☐

Tick One Box Only

Specialties

Stockbrokers, Building Societies

Legal, HP Accounting

Retail Accounting

Payroll

General Comments

COMPUTER BUREAU SUMMARY		Ref. 95a
Company Control Data Ltd - DP Division		
Parent Company Control Data Corporation		
Headquarters Town	Barnet	Area: Herts
Telephone Number	440 5161	
Contact Name	N J Bowyer	Title: DPS Sales Manager
Managing Director		

Base Year	1979	Total Group Sales	£3.25 M	E
Employment Total	250	Total Bureau Sales	£1.25 M	E
Ops/Data		Bureau IBM Sales	£1.25 M	E
Dev.		Bureau Other Sales	-	
Other	60			
Growth Rate % p.a.	35			
Geographical Category	L	Sales Turnover Category	D	

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
3031 Terminals	7	11	£1.25 M	£1.25 M	360/65 replaced recently with 3031
TOTALS	X			£1.25 M	

<p>Bureau Type</p> <p>Batch <input type="checkbox"/></p> <p>RCS <input type="checkbox"/></p> <p>Comprehensive <input type="checkbox"/></p> <p>Data Prep. <input type="checkbox"/></p> <p>Tick One Box Only</p>	<p>Specialties</p> <p>General Accounting</p> <p>Publishing</p> <p>Direct Mail</p> <p>Cost Accounting</p> <p>.....</p>
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General Comments

This installation was formerly ITT Data Services

COMPUTER BUREAU SUMMARY				Ref. 956																																			
Company Control Data Ltd - Int N/W Services UK																																							
Parent Company Control Data Corporation																																							
Headquarters Town		Area:																																					
Barnet		Herts																																					
Telephone Number		440 5161																																					
Contact Name		Title:																																					
G Holland		Sales Manager																																					
Managing Director																																							
<table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">Base Year</td> <td style="width: 10%; border: 1px solid black; text-align: center;">1979</td> <td style="width: 10%;">Total Group Sales</td> <td style="width: 10%; border: 1px solid black; text-align: center;">£3.00</td> <td style="width: 40%;"></td> </tr> <tr> <td>Employment Total</td> <td style="border: 1px solid black; text-align: center;">100</td> <td>Total Bureau Sales</td> <td style="border: 1px solid black; text-align: center;">£2.70</td> <td></td> </tr> <tr> <td>Ops/Data</td> <td style="border: 1px solid black; text-align: center;">40</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Dev.</td> <td style="border: 1px solid black; text-align: center;">25</td> <td>Bureau IBM Sales</td> <td style="border: 1px solid black; text-align: center;">£ .70</td> <td></td> </tr> <tr> <td>Other</td> <td style="border: 1px solid black; text-align: center;">35</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Growth Rate % p.a.</td> <td style="border: 1px solid black;"></td> <td>Bureau Other Sales</td> <td style="border: 1px solid black;"></td> <td></td> </tr> <tr> <td>Geographical Category</td> <td style="border: 1px solid black; text-align: center;">L</td> <td>Sales Turnover Category</td> <td style="border: 1px solid black; text-align: center;">P</td> <td></td> </tr> </table>					Base Year	1979	Total Group Sales	£3.00		Employment Total	100	Total Bureau Sales	£2.70		Ops/Data	40				Dev.	25	Bureau IBM Sales	£ .70		Other	35				Growth Rate % p.a.		Bureau Other Sales			Geographical Category	L	Sales Turnover Category	P	
Base Year	1979	Total Group Sales	£3.00																																				
Employment Total	100	Total Bureau Sales	£2.70																																				
Ops/Data	40																																						
Dev.	25	Bureau IBM Sales	£ .70																																				
Other	35																																						
Growth Rate % p.a.		Bureau Other Sales																																					
Geographical Category	L	Sales Turnover Category	P																																				
Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans																																		
RJE - IBM		20			Mainframe IBM Computers Cleveland - 9 x 370/158's Mainframe CDC based on Cyber 73, Cyber 173 and Cyber 175 - Location Brussels																																		
RJE - Cyber		52																																					
		Ports																																					
TOTALS	X																																						
Bureau Type					Specialties																																		
Batch <input type="checkbox"/>					Comprehensive time-sharing for																																		
RCS <input type="checkbox"/>					general problem solving.																																		
Comprehensive <input type="checkbox"/>					IBM call service for medium																																		
Data Prep. <input type="checkbox"/>					weight problems, CDC service																																		
					for heavier scientific problem																																		
Tick One Box Only					solving.																																		
General Comments																																							
Estimates assume 72 ports loaded to 60% capacity on one shift i.e. 43 ports in use on average. Revenue assumed 75% CDC, 25% IBM																																							

COMPUTER BUREAU SUMMARY					Ref. 96
Company C E G B Computing Bureau					
Parent Company CEGB					
Headquarters Town		London		Area:	City
Telephone Number		248 1202 x 6414			
Contact Name		J R Wheeler		Title:	Sales Exec.
Managing Director					
Base Year		1979		Total Group Sales	£10.50 M E
Employment Total		250		Total Bureau Sales	£ 8.00 M E
Ops/Data				Bureau IBM Sales	£ 7.00 M E
Dev.				Bureau Other Sales	£ 1.00 M
Other					
Growth Rate % p.a.		27			
Geographical Category		L		Sales Turnover Category	H

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
370/168	9	2	2.50	£5.00 M	
3032	9	1	2.00	2.00	
GEC 4080	3	4	.25	1.00	
TOTALS				£8.00 M	

<p>Bureau Type</p> <p>Batch <input type="checkbox"/></p> <p>RCS <input type="checkbox"/></p> <p>Comprehensive <input checked="" type="checkbox"/></p> <p>Data Prep. <input type="checkbox"/></p> <p>Tick One Box Only</p>	<p>Specialties</p> <p>Engineering & Nuclear Physics</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p>General Comments</p>	

COMPUTER BUREAU SUMMARY

Ref.
123

Company

Compower

Parent Company

National Coal Board

Headquarters Town

Cannock

Area:

W. Midlands

Telephone Number

05435 2511

Contact Name

E Thomas

Title:

General Manager, Marketing

Managing Director

Base Year

1979

Total
Group
Sales

£16.00

E

Employment Total

1000

Total
Bureau
Sales

£11.00

E

Ops/Data

650

Dev.

Bureau
IBM
Sales

£ 7.10

E

Other

Growth Rate % p.a.

Bureau
Other
Sales

£ 3.90

E

Geographical Category

M

Sales Turnover Category

J

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
3033	9	1	2.50		
370/158	8	1	1.50	4.00	Cannock
1903A	6	1	.60		
360/30	3	1	.20	0.80	Edinburgh
360/40	4	1	.40		
1904A	7	1	.90	1.30	Gateshead
370/158	8	1	1.50		
2970	8	1	1.50	3.00	Doncaster
360/50	7	1	1.00		
1904-1204A	7	1	.90	1.90	Warrington
TOTALS	X	10		11.00	

Bureau Type

Batch

☐

RCS

☐

Comprehensive

☒

Data Prep.

☐

Tick One Box Only

Specialties

OCR, Wideband 48 Kb, Network

Transportation, Mining,.....

General Accounting.....

Program Development Services

.....

General Comments

All sites are interconnected

COMPUTER BUREAU SUMMARY	Ref. E15
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Company Computime Ltd

Parent Company Private

Headquarters Town Dublin	Area: Eire
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Telephone Number 0001 760 884

Contact Name	Title:
--------------	--------

Managing Director J K Gallagher

Base Year	1979	Total Group Sales	150,000
Employment Total	<input type="text"/>	Total Bureau Sales	<input type="text"/>
Ops/Data	<input type="text"/>	Bureau IBM Sales	<input type="text"/>
Dev.	<input type="text"/>	Bureau Other Sales	<input type="text"/>
Other	<input type="text"/>		
Growth Rate % p.a.	<input type="text"/>		
Geographical Category	I	Sales Turnover Category	A

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM Sys 3/8	2	1			
TOTALS	X				

<p>Bureau Type</p> <p>Batch <input checked="" type="checkbox"/></p> <p>RCS <input type="checkbox"/></p> <p>Comprehensive <input type="checkbox"/></p> <p>Data Prep. <input type="checkbox"/></p> <p>Tick One Box Only</p>	<p>Specialties</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
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General Comments

COMPUTER BUREAU SUMMARY				Ref. 182
Company C R L				
Parent Company C R L International				
Headquarters Town London		Area: Central		
Telephone Number 437 - 4083				
Contact Name C W A Harris		Title:		
Managing Director Tony Richardson				
Base Year	1979		Total Group Sales	£1 M E
Employment Total	58		Total Bureau Sales	£650,000 E
Ops/Data			Bureau IBM Sales	£600,000 E
Dev.			Bureau Other Sales	£ 50,000 E
Other				
Growth Rate % p.a.				
Geographical Category	L		Sales Turnover Category	C

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
RJE		48	} E'M	E'M	
Terminals		Ports			
370/158	8	2			
370/168	9	1			
ICL 2903	3	1		50,000	
TOTALS	X			£650,000	

<p>Bureau Type</p> <p>Batch <input type="checkbox"/></p> <p>RCS <input checked="" type="checkbox"/></p> <p>Comprehensive <input type="checkbox"/></p> <p>Data Prep. <input type="checkbox"/></p> <p>Tick One Box Only</p>	<p>Specialties</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p>General Comments</p>	

COMPUTER BUREAU SUMMARY

Ref.
185

Company

CSS International UK Ltd

Parent Company

National CSS Inc.

Headquarters Town

London

Area:

Central

Telephone Number

834 2223

Contact Name

Jim Thomas

Title:

London Branch Manager

Managing Director

F B Lees

Base Year

1979

Total
Group
Sales

£500,000

E

Employment Total

25

Total
Bureau
Sales

£400,000

E

Ops/Data

Dev.

Other

Bureau
IBM
Sales

£400,000

E

Growth Rate % p.a.

15

Bureau
Other
Sales

Geographical Category

L

Sales Turnover Category

C

Machines

C
A
T

Qty

Est'd
Revenue
Each

Est'd
Total
Revenue

Geography/Plans

RJE and Inter-
active
Terminals
in UK

400,000

In USA
2 x 370/168
1 x Amdahl V 6
1 x IBM 370/168
2 x Transatlantic cables
giving 9600 baud at 150K
pa cost & 30 RJE terminal
potential

TOTALS

X

400,000

Bureau Type

Batch

RCS

Comprehensive

Data Prep.

☐
☒
☐
☐

Specialties

Lens Design

Circuit Analysis

Oil Industry

Graphics

Engineering

Tick One Box Only

General Comments

Mainly scientific and Management Science users on an inter-active basis. Strong proprietary database package available on network computers located at Stamford, Connecticut and California

COMPUTER BUREAU SUMMARY	Ref. 192
-------------------------	-------------

Company

Cypher Computers Ltd

Parent Company

Benton Television

Headquarters Town

Newcastle

Area:

North

Telephone Number

0632 - 21705

Contact Name

Title:

Managing Director

Base Year

1979

Total
Group
Sales

£240,000

E

Employment Total

12

Total
Bureau
Sales

£134 K

E

Ops/Data

Dev.

Other

Bureau
IBM
Sales

£202 K

E

Growth Rate % p.a.

Bureau
Other
Sales

£114 K

E

Geographical Category

N

Sales Turnover Category

A

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM Series 1	4	1	15	17	
IBM 5110	1	1	1	3	
B721	1	1	25	25	
B1700	4	1	50	50	
B80	2	1	10	10	
B800	3	1	25	25	
L8000	1	1	2	2	
L9000	1	1	3	3	
TOTALS	X	8		134	

Bureau Type

Batch

RCS

Comprehensive

Data Prep.

☒
☐
☐
☐

Specialties

Building Societies

TV Rental Accounting

Hotel Accounting

Tick One Box Only

General Comments

COMPUTER BUREAU SUMMARY

Ref.
196

Company

Data Computing & Consultancy

Parent Company

The Southern Accounting Service Ltd

Headquarters Town

Sutton

Area:

Surrey

Telephone Number

643 6326

Contact Name

Title:

Managing Director

P R Boden

Base Year

Total
Group
Sales

£80 K

E

Employment Total

6

Total
Bureau
Sales

£20 K

E

Ops/Data

Dev.

Bureau
IBM
Sales

£20 K

E

Other

Growth Rate % p.a.

Bureau
Other
Sales

Geographical Category

SH

Sales Turnover Category

A

Machines

C
A
T

Qty

Est'd
Revenue
Each

Est'd
Total
Revenue

Geography/Plans

IBM 1130

2

£20 K

TOTALS

X

£20 K

Bureau Type

Batch

☒

RCS

☐

Comprehensive

☐

Data Prep.

☐

Specialties

Market Research

.....
.....
.....
.....
.....

Tick One Box Only

General Comments

COMPUTER BUREAU SUMMARY

Ref.

206

Company

Data Link

Parent Company

Delta Lambda Ltd

Headquarters Town

Wallington

Area:

Surrey

Telephone Number

669 - 0006/8

Contact Name

Title:

Managing Director

Base Year

1979

Total
Group
Sales

£600,000

E

Employment Total

50

Total
Bureau
Sales

£500,000

E

Ops/Data

Dev.

Other

Bureau
IBM
Sales

£500,000

E

Growth Rate % p.a.

Bureau
Other
Sales

Geographical Category

SH

Sales Turnover Category

C

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM Sys.34	2	1	}	Estimate Based on Staffing Not Hardware	
Sys.32	2	1			
IBM 3742					
TOTALS	X				

Bureau Type

Batch

RCS

Comprehensive

Data Prep.

☐☐☐☒

Specialties

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Tick One Box Only

General Comments

Largest IBM Diskette Batch Data Preparation Bureau

COMPUTER BUREAU SUMMARY

Ref.
215

Company

Data Punch Ltd

Parent Company

Private

Headquarters Town

Glasgow

Area:

Scotland

Telephone Number

248-6951

Contact Name

W.J. McLauchlin

Title:

M.D.

Managing Director

Base Year

1979

Total
Group
Sales

£650,000

Employment Total

40

Total
Bureau
Sales

£500,000

E

Ops/Data

Dev.

Other

Bureau
IBM
Sales

£500,000

E

Growth Rate % p.a.

30

Bureau
Other
Sales

Geographical Category

SC

Sales Turnover Category

C

Machines

C
A
T

Qty

Est'd
Revenue
Each

Est'd
Total
Revenue

Geography/Plans

IBM System 3
Card & Floppy
Disk IBM
Equipment

3

Revenue
Estimate
Not Based
on
Hardware

TOTALS

X

Bureau Type

Batch

RCS

Comprehensive

Data Prep.

☒
☐
☐
☐

Specialties

Legal and Accounting

Professions

Tick One Box Only

General Comments

Mainly Data Preparation but also full page of
systems for legal and accounting profession.

COMPUTER BUREAU SUMMARY	Ref. E17
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Company Data Services Ltd.

Parent Company Private

Headquarters Town Dublin Area: Eire

Telephone Number 0001 - 746976

Contact Name Title:


Managing Director B J Halt

Base Year	1979		Total Group Sales	£114,000
Employment Total			Total Bureau Sales	
Ops/Data				
Dev.			Bureau IBM Sales	
Other				
Growth Rate % p.a.	20		Bureau Other Sales	
Geographical Category	I		Sales Turnover Category	A

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
TOTALS	X				

<p>Bureau Type</p> <p style="margin-left: 40px;">Batch <input type="checkbox"/></p> <p style="margin-left: 40px;">RCS <input type="checkbox"/></p> <p style="margin-left: 40px;">Comprehensive <input type="checkbox"/></p> <p style="margin-left: 40px;">Data Prep. <input type="checkbox"/></p> <p style="margin-top: 20px;">Tick One Box Only</p>	<p>Specialties</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
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General Comments

COMPUTER BUREAU SUMMARY				Ref. 222	
Company Data Stream International Ltd.					
Parent Company BOC Datasolve (35%)					
Headquarters Town London			Area: City		
Telephone Number 600 - 6411					
Contact Name Tony Helman			Title: M.D.		
Managing Director					
Base Year		<div style="border: 1px solid black; padding: 2px;">1979</div>		Total Group Sales	<div style="border: 1px solid black; padding: 2px;">£3.5 M E</div>
Employment Total		<div style="border: 1px solid black; padding: 2px;">200</div>		Total Bureau Sales	<div style="border: 1px solid black; padding: 2px;">£2.0 M E</div>
Ops/Data		<div style="border: 1px solid black; padding: 2px;">20</div>		Bureau IBM Sales	<div style="border: 1px solid black; padding: 2px;">£2.0 M E</div>
Dev.		<div style="border: 1px solid black; padding: 2px;">5</div>		Bureau Other Sales	<div style="border: 1px solid black; padding: 2px;"></div>
Other		<div style="border: 1px solid black; padding: 2px;">175</div>			
Growth Rate % p.a.		<div style="border: 1px solid black; padding: 2px;">25</div>			
Geographical Category		<div style="border: 1px solid black; padding: 2px;">L</div>		Sales Turnover Category <div style="border: 1px solid black; padding: 2px;">F</div>	

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM370/158 Argus : Terminals (Linwood)	8 3	1 2 300 app	} £2.0 M	£2.0 M	Upgrade to IBM alternative (ITEL or AMDAHL) in the next 18 months
TOTALS	X				

<p>Bureau Type</p> <p>Batch <input type="checkbox"/></p> <p>RCS <input type="checkbox"/></p> <p>Comprehensive <input type="checkbox"/></p> <p>Data Prep. <input type="checkbox"/></p> <p>Tick One Box Only</p>	<p>Specialties</p> <p>Financial Database</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
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General Comments

Services to banks, investment institutions and stockbrokers

COMPUTER BUREAU SUMMARY

Ref.
224

Company

Data Transfer International Ltd

Parent Company Other

Headquarters Town

Croydon

Area:

Surrey

Telephone Number

681 - 1041

Contact Name

Brian Gelkein

Title: M.D.

Managing Director

Base Year

Total
Group
Sales

£850,000

E

Employment Total

55

Total
Bureau
Sales

£750,000

E

Ops/Data

Dev.

Bureau
IBM
Sales

£750,000

E

Other

Growth Rate % p.a.

Bureau
Other
Sales

Geographical Category

SH

Sales Turnover Category

C

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
RJE Links					IBM 370/158 and IBM 370/145 located
TOTALS	X				

Bureau Type

Batch

☐

RCS

☒

Comprehensive

☐

Data Prep.

☐

Tick One Box Only

Specialties

Name and address processing
for direct mailing and
direct marketing

General Comments

COMPUTER BUREAU SUMMARY

Ref.
231

Company

Delta Computer Services (1978) Ltd

Parent Company

Private

Headquarters Town

London

Area:

Central

Telephone Number

403 1040

Contact Name

R C Ballarc

Title:

Director

Managing Director

Base Year

Total
Group
Sales

£250,000

E

Employment Total

14

Total
Bureau
Sales

£200,000

E

Ops/Data

Dev.

Bureau
IBM
Sales

£200,000

E

Other

Growth Rate % p.a.

Bureau
Other
Sales



Geographical Category

L

Sales Turnover Category

A

Machines

C
A
T

Qty

Est'd
Revenue
Each

Est'd
Total
Revenue

Geography/Plans

RJE
Terminals

say

£200,000

Mainframe was IBM 370/158

TOTALS

X

Bureau Type

Batch

☐

RCS

☒

Comprehensive

☐

Data Prep.

☐

Specialties

.Accounting.....

.Market Research.....

.Cable Balancing.....

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Tick One Box Only

General Comments

IBM 370/158 replaced by Harris RJE Terminal. Raw time
bought wholesale from TEAMCO.

COMPUTER BUREAU SUMMARY		Ref.
Company	Denco (Holdings) Ltd	
Parent Company	Denco (Holdings) Ltd	
Headquarters Town	Hereford	Area: West Country
Telephone Number	0432 68151	
Contact Name	A.S. Miller	Title: M.D.
Managing Director		

Base Year	<input type="text"/>	Total Group Sales	<input type="text" value="£100 K"/>	<input type="text" value="E"/>
Employment Total	<input type="text" value="8"/>	Total Bureau Sales	<input type="text" value="£20 K"/>	<input type="text" value="E"/>
Ops/Data	<input type="text"/>	Bureau IBM Sales	<input type="text" value="£20 K"/>	<input type="text" value="E"/>
Dev.	<input type="text"/>	Bureau Other Sales	<input style="height: 20px; width: 100%;" type="text"/>	
Other	<input type="text"/>			
Growth Rate % p.a.	<input type="text"/>			
Geographical Category	<input type="text" value="W"/>	Sales Turnover Category	<input type="text" value="A"/>	

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM Sys 34	2	1		£20 K External	
TOTALS	X			20 K	

<p>Bureau Type</p> <p>Batch <input type="checkbox"/></p> <p>RCS <input type="checkbox"/></p> <p>Comprehensive <input type="checkbox"/></p> <p>Data Prep. <input type="checkbox"/></p> <p>Tick One Box Only</p>	<p>Specialties</p> <p>Air Conditioning Installations</p> <p>Industrial Lubrication</p> <p>.....</p> <p>.....</p> <p>.....</p>
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General Comments

Other limited external services in manufacturing and financial applications

COMPUTER BUREAU SUMMARY

Ref.
232.15

Company **Donovan Data Systems Inc.**

Parent Company **Private**

Headquarters Town **London** Area: **Central**

Telephone Number **629 9913**

Contact Name **Michael Donovan** Title: **President**

Managing Director

Base Year	1979	Total Group Sales	£400,000 E
Employment Total	17	Total Bureau Sales	£300,000 E
Ops/Data	8	Bureau IBM Sales	£300,000 E
Dev.		Bureau Other Sales	
Other			
Growth Rate % p.a.			
Geographical Category	L	Sales Turnover Category	B

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 370/125	5	1			
Terminals					
TOTALS	X				

<p>Bureau Type</p> <p>Batch <input checked="" type="checkbox"/></p> <p>RCS <input type="checkbox"/></p> <p>Comprehensive <input type="checkbox"/></p> <p>Data Prep. <input type="checkbox"/></p> <p>Tick One Box Only</p>	<p>Specialties</p> <p>On-Line interactive</p> <p>Accounting and media</p> <p>Services for advertising....</p> <p>agencies.....</p> <p>.....</p>
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General Comments

COMPUTER BUREAU SUMMARY

Ref.
232.27

Company Eastern Computer Services Ltd

Parent Company Geest

Headquarters Town Peterborough Area: East Midlands

Telephone Number 0733 51231

Contact Name J H Marshall Title: Sales Manager

Managing Director

Base Year	<div>1979</div>	Total Group Sales	<div>£1,000,000 E</div>
Employment Total	<div>60</div>	Total Bureau Sales	<div>£638,000 G</div>
Ops/Data	<div>56</div>	Bureau IBM Sales	<div>£638,000 G</div>
Dev.	<div></div>	Bureau Other Sales	<div>-</div>
Other	<div></div>		
Growth Rate % p.a.	<div>20</div>		
Geographical Category	<div>A</div>	Sales Turnover Category	<div>C</div>

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 370/135	6	1			Recently upgraded to the 370/135 for a 370/125
TOTALS	X				

Bureau Type

Batch

RCS

Comprehensive

Data Prep.

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Tick One Box Only

Specialties

Food Retailing

Engineering

Payroll

General Accounting

General Comments

COMPUTER BUREAU SUMMARY

Ref.
236

Company E J V Data Services

Parent Company E.J Venner & Co Ltd

Headquarters Town London Area: City

Telephone Number 407 - 8791

Contact Name D H Fitch Title:

Managing Director

Base Year	<input type="text" value="1979"/>	Total Group Sales	<input type="text" value="£ 300,000"/>	<input type="text" value="E"/>
Employment Total	<input type="text" value="12"/>	Total Bureau Sales	<input type="text" value="£ 250,000"/>	<input type="text" value="E"/>
Ops/Data	<input type="text"/>	Bureau IBM Sales	<input type="text" value="£ 250,000"/>	<input type="text" value="E"/>
Dev.	<input type="text"/>	Bureau Other Sales	<input type="text"/>	
Other	<input type="text"/>			
Growth Rate % p.a.	<input type="text"/>			
Geographical Category	<input type="text" value="L"/>	Sales Turnover Category	<input type="text" value="B"/>	

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 60/40	5	1	£ 250,000		
TOTALS	X		£ 250,000		

Bureau Type

Batch ☒

RCS ☐

Comprehensive ☐

Data Prep. ☐

Tick One Box Only

Specialties

Stock Control, Hotels and

Public Houses

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.....

General Comments

COMPUTER BUREAU SUMMARY					Ref. 247
Company Extel Computing Ltd					
Parent Company Exchange Telegraph Company					
Headquarters Town		London		Area:	City
Telephone Number		638 5544			
Contact Name		R. Hoare		Title: Sales Executive	
Managing Director		M W Warburg			
Base Year	1979		Total Group Sales	£1.5 M E	
Employment Total	100		Total Bureau Sales	£1 M E	
Ops/Data			Bureau IBM Sales	£1 M E	
Dev.	25		Bureau Other Sales		
Other					
Growth Rate % p.a.	17				
Geographical Category	L		Sales Turnover Category	D	

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 370/148 ICL 1500	7	1	£1.00 M	£1.00 M	Upgraded from 370/138 end of year. Have an ICL 1500. Intend to get another for FEP
TOTALS	X			£1.00 M	

<p>Bureau Type</p> <p>Batch <input type="checkbox"/></p> <p>RCS <input type="checkbox"/></p> <p>Comprehensive <input type="checkbox"/></p> <p>Data Prep. <input type="checkbox"/></p> <p>Tick One Box Only</p>	<p>Specialties</p> <p>Stock Exchange Services (focus)</p> <p>Pension Fund Accounting</p> <p>Investment Accounting for</p> <p>Financial Institutions</p> <p>.....</p>
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General Comments

Turnover is actually about £2 M (given)

Latest interview data from Mr Shapcote

COMPUTER BUREAU SUMMARY

Ref.
264Company
Fosse Computer ServicesParent Company
Private

Headquarters Town Loughborough Area: E. Midlands

Telephone Number 0509 66445

Contact Name A. Parkes Title: Director

Managing Director
D.J. Theobald

Base Year

1979

Total
Group
Sales

£200,000

E

Employment Total

8

Total
Bureau
Sales

£180,000

E

Ops/Data

Dev.

Other

Bureau
IBM
Sales

£180,000

E

Growth Rate % p.a.

Bureau
Other
Sales

Geographical Category

M

Sales Turnover Category

A

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM Sys 3/15	3	1	180,000	180,000	
TOTALS	X			180,000	

Bureau Type

Batch

RCS

Comprehensive

Data Prep.

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☐
☐
☐

Specialties

Sales Ledger

Payroll

Tick One Box Only

General Comments

COMPUTER BUREAU SUMMARY

Ref.
270

Company

GEC Midland Computer Services Ltd

Parent Company

The General Electric Company Ltd

Headquarters Town

Stafford

Area:

W. Midlands

Telephone Number

0785 54543

Contact Name

R R Boak

Title:

Sales Support Manager

Managing Director

R W Northwood

Base Year

1979

Total
Group
Sales

£11.3 M

E

Employment Total

350

Total
Bureau
Sales

£ 8.5 M

E

Ops/Data

175

Dev.

Bureau
IBM
Sales

£ 7.5 M

E

Other

Growth Rate % p.a.

Bureau
Other
Sales

Geographical Category

M

Sales Turnover Category

I

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 3033	9	1	2.0	2.0	Stafford Newport - check Whetstone Barnet Barnet
IBM 3033	9	2	2.0	4.0	
IBM 370/158	8	1	1.5	1.5	
H 1648	6	2	0.5	1.0	
Terminals					
IMS		75			
TSO		90			
RJE		50			
Interactive		100			
TOTALS				£8.5M	

Bureau Type

Batch

RCS

Comprehensive

Data Prep.

Specialties

Tick One Box Only

General Comments

COMPUTER BUREAU SUMMARY

Ref.
280

Company

GMS Computing Ltd

Parent Company

The Johnson & Firth Brown Group

Headquarters Town

Sheffield

Area:

North

Telephone Number

0742 730191

Contact Name

Title:

Managing Director

Martin Chatwin

Base Year

1979

Total
Group
Sales

£1,200,000 E

Employment Total

63

Total
Bureau
Sales

£ 906,000 G

Ops/Data

16

Dev.

7

Bureau
IBM
Sales

£ 600,000 E

Other

40

Growth Rate % p.a.

25

Bureau
Other
Sales

£ 306,000 E

Geographical Category

N

Sales Turnover Category

C

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 370/138	6	1	700	600	Recently added 2 x 2903's to the hardware inventory
ICL 2903/4	3	3	100	300	
Inforex 7000 (Key to Disc)		2			
TOTALS	X			900,000	

Bureau Type

Batch

☐

RCS

☐

Comprehensive

☐

Data Prep.

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Tick One Box Only

Specialties

Melt optimisation

Die stock Control

Bar cutting

Pensions Administration

Fixed Asset Accounting

General Comments

COMPUTER BUREAU SUMMARY

Ref.

282

Company

GOR - RAY LTD

Parent Company

Other

Headquarters Town

Enfield

Area:

Middlesex

Telephone Number

363 - 1313

Contact Name

J.W. Barker

Title:

D.P. Manager

Managing Director

Base Year

1979

Total
Group
Sales

£220,000

E

Employment Total

20

Total
Bureau
Sales

£150,000

E

Ops/Data

15

Dev.

Bureau
IBM
Sales

£120,000

E

Other

3

Growth Rate % p.a.

Bureau
Other
Sales

£ 30,000

E

Geographical Category

NH

Sales Turnover Category

A

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 360/20	2	1	120,000	120,000	
H 62/40	2	1	30,000	30,000	
TOTALS	X			150,000	

Bureau Type

Batch

RCS

Comprehensive

Data Prep.

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Tick One Box Only

Specialties

.Textiles.....

.Retailing.....

.Engineering.....

.Inventory Control &.....

.General Accounting.....

General Comments

COMPUTER BUREAU SUMMARY

Ref.
284

Company Grandmetropolitan Information Processing Ltd (GHP)

Parent Company Grand Metropolitan Group of Companies

Headquarters Town Uxbridge Area: W. London

Telephone Number 0895 58111

Contact Name D.A. Shermer Title: P.R. Executive

Managing Director J. Herbert - Computer Control Manager

Base Year	<input type="text" value="1979"/>	Total Group Sales	<input type="text" value="£6.20 M E"/>
Employment Total	<input type="text" value="350"/>	Total Bureau Sales	<input type="text" value="£4.00 M E"/>
Ops/Data	<input type="text"/>	Bureau IBM Sales	<input type="text" value="£4.00 M E"/>
Dev.	<input type="text"/>	Bureau Other Sales	<input type="text"/>
Other	<input type="text"/>		
Growth Rate % p.a.	<input type="text"/>		
Geographical Category	<input type="text" value="NH"/>	Sales Turnover Category	<input type="text" value="G"/>

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
ITEL A 9/5	9	1	£'M 2.50	£'M 2.50	Replaced 2 x 370/145's & 2 x ICL 1903T with IBM 3031 in Oct. 78
3031	9	1	1.50	1.50	
TOTALS	X	2		4.00	

Bureau Type

Batch ☐

RCS ☐

Comprehensive ☒

Data Prep. ☐

Tick One Box Only

Specialties

Food, Drink, Leisure Industries

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.....

.....

General Comments

COMPUTER BUREAU SUMMARY

Ref.
290

Company
Grove Computer Services Ltd.

Parent Company
Data Contracts Ltd.

Headquarters Town
London Area: East

Telephone Number
556 6444

Contact Name Title:

Managing Director
R.L. Prance

Base Year	<input type="text" value="1979"/>	Total Group Sales	<input type="text" value="£ 90,000"/>	<input type="text" value="E"/>
Employment Total	<input type="text" value="7"/>	Total Bureau Sales	<input type="text" value="£ 80,000"/>	<input type="text" value="E"/>
Ops/Data	<input type="text"/>	Bureau IBM Sales	<input type="text" value="£ 80,000"/>	<input type="text" value="E"/>
Dev.	<input type="text"/>	Bureau Other Sales	<input type="text" value="£ 80,000"/>	<input type="text" value="E"/>
Other	<input type="text"/>			
Growth Rate % p.a.	<input type="text"/>			
Geographical Category	<input type="text" value="L"/>	Sales Turnover Category	<input type="text" value="A"/>	

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM Sys 34	2	1		60,000	
3741 Cards		2		20,000	
TOTALS	X	3		80,000	

Bureau Type

Batch
RCS
Comprehensive
Data Prep.

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Tick One Box Only

Specialties

Ledger Accounting
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.....
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General Comments

Small Data Prep & Ledger Accounting Operation

COMPUTER BUREAU SUMMARY

Ref.
293

Company Hadrian Computer Services Ltd.

Parent Company Cattles Holdings Ltd

Headquarters Town Newcastle Area: North

Telephone Number 0632 685506

Contact Name J.A. Moodie Title: General Manager

Managing Director J.D. Weightman

Base Year	<input type="text" value="1979"/>	Total Group Sales	<input type="text" value="£675,000"/>	<input type="text" value="E"/>
Employment Total	<input type="text" value="45"/>	Total Bureau Sales	<input type="text" value="£250,000"/>	<input type="text" value="E"/>
Ops/Data	<input type="text" value="10"/>	Bureau IBM Sales	<input type="text" value="£100,000"/>	<input type="text" value="E"/>
Dev.	<input type="text"/>	Bureau Other Sales	<input type="text" value="£150,000"/>	<input type="text" value="E"/>
Other	<input type="text" value="35"/>			
Growth Rate % p.a.	<input type="text"/>			
Geographical Category	<input type="text" value="N"/>	Sales Turnover Category	<input type="text" value="B"/>	

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
ICL 2903	3	1	100,000	100,000	
P 350	1	1			
P 410	1	1	45,000	45,000	
P 320	1	1			
IBM Sys 32	2	1			
IBM SI	4	1	100,000	100,000	
IBM 5110	1	1			
System 800		1	5,000	5,000	
TOTALS	X	8		250,000	

Bureau Type

Batch ☒

RCS ☐

Comprehensive ☐

Data Prep. ☐

Tick One Box Only

Specialties

H.P. Accounting - Retail

General Accounting

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General Comments

COMPUTER BUREAU SUMMARY

Ref.
294

Company

Hallmark Associates Computer Services Ltd.

Parent Company

Hallmark

Headquarters Town

Woking

Area:

Surrey

Telephone Number

04862 - 64611

Contact Name

M. Hill

Title:

Managing Director

L.L.D. Rates

Base Year

1979

Total
Group
Sales

£165,000

E

Employment Total

11

Total
Bureau
Sales

£100,000

E

Ops/Data

Dev.

Other

Bureau
IBM
Sales

£ 85,000

E

Growth Rate % p.a.

Bureau
Other
Sales

£ 15,000

E

Geographical Category

SH

Sales Turnover Category

A

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
360/30	3	1	85,000	85,000	
Multibus	2	1	15,000	15,000	
TOTALS	X	2		100,000	

Bureau Type

Batch

RCS

Comprehensive

Data Prep.

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☐
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Tick One Box Only

Specialties

Commercial Accounting

ASMAP Package for

stock and production control

General Comments

COMPUTER BUREAU SUMMARY

Ref.
308

Company

Hoskyns Systems Limited

Parent Company

Hoskyns Group

Headquarters Town

London

Area:

City

Telephone Number

242 1951

Contact Name

Title:

Managing Director

Base Year

1979

Total
Group
Sales

£12.00 M

E

Employment Total

530

Total
Bureau
Sales

£ 5.3 M

E

Ops/Data

250

Dev.

Bureau
IBM
Sales

£ 1.8 M

E

Other

Growth Rate % p.a.

Bureau
Other
Sales

£ 2.5 M

E

Geographical Category

L

Sales Turnover Category

G

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
2903	3	3	£200 K	£600 K	
1901	3	3	£200 K	£600 K	
2904	4	1	£400 K	£400 K	
1902	4	2	£250 K	£500 K	
1903 A	5	1	£600 K	£600 K	
U90/60	4	1	£300 K	£300 K	
IBM 360/50	7	2	£900 K	£1,800 K	
TOTALS	X	13		£5,300	

Bureau Type

Batch

☒

RCS

☐

Comprehensive

☐

Data Prep.

☐

Tick One Box Only

Specialties

Geographical Coverage

.....
Manufacturing & Accounting Systems
for small manufacturing
industries

General Comments

COMPUTER BUREAU SUMMARY		Ref.
Company IBM Remote Computing Services		
Parent Company IBM UK Ltd		
Headquarters Town	Chiswick	Area: London W
Telephone Number	995 - 1441	
Contact Name	Vivian Lewis	Title: Marketing Support Manager
Managing Director	Michael Mylcrest (RCS Manager)	

Base Year	<input type="text"/>	Total Group Sales	£15,00 M
Employment Total	N.G.	Total Bureau Sales	£15,00 M
Ops/Data	<input type="text"/>	Bureau IBM Sales	£2.25 M
Dev.	<input type="text"/>	Bureau Other Sales	<input type="text"/>
Other	<input type="text"/>		
Growth Rate % p.a.	<input type="text"/>		
Geographical Category	L	Sales Turnover Category	K

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
370/168	9	6	2.5 M	£15 M	Warwick is now building up to the main RCS site for IBM's Bureaux activities. The call service is presently on two 370/155's not listed because they are being cut over to the 370/168's at Warwick.
TOTALS	X			£15 M	

<p>Bureau Type</p> <p>Batch <input type="checkbox"/></p> <p>RCS <input type="checkbox"/></p> <p>Comprehensive <input type="checkbox"/></p> <p>Data Prep. <input type="checkbox"/></p> <p>Tick One Box Only</p>	<p>Specialties</p> <p>Terminal Business System (TBS)</p> <p>.APL.....</p> <p>CALL</p> <p>.....</p> <p>.....</p>
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General Comments

About 83% of RCS capacity is used for IBM's own activities of internal product development and customer support. IBM's external RCS revenue is believed to be about £2.25 M at present Other IBM hardware not listed here is used mainly for IBM DP customer development and is not to be confused with hardware for RCS services.

COMPUTER BUREAU SUMMARY

Ref.
337

Company
Jaserve Ltd

Parent Company
-

Headquarters Town
Camberley Area: Surrey

Telephone Number
025 16 6331 & 0276 62011

Contact Name
C. Richards Title: Sales Manager

Managing Director
D. Atkinson

Base Year

1979

Total
Group
Sales

£2 M

G

Employment Total

110

Total
Bureau
Sales

£1.3 M

E

Ops/Data

65

Dev.

Other

45

Bureau
IBM
Sales

£1.3 M

E

Growth Rate % p.a.

100

Bureau
Other
Sales

Geographical Category

SH

Sales Turnover Category

E

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 360/50	7	1	£1.3 M	£1.3 M	
Ontel OP1/64 (Mini)	3				
TOTALS	X			£1.3 M	

Bureau Type

Batch

RCS

Comprehensive

Data Prep.



Tick One Box Only

Specialties

Motor Trade

Air Freight

Marketing (Motor Trade)

General Comments

Ontel used only for Turnkey Systems to the Motor Trade.

COMPUTER BUREAU SUMMARY

Ref.
338

Company JBS Computer Services Ltd

Parent Company -

Headquarters Town Wednesbury Area: Staffs

Telephone Number 021 556 6828

Contact Name M.D. Jones Title: Sales Executive

Managing Director G. Barnett

Base Year	<input type="text" value="1979"/>	Total Group Sales	<input type="text" value="£70,000"/>	<input type="text" value="E"/>
Employment Total	<input type="text" value="6"/>	Total Bureau Sales	<input type="text" value="£20,000"/>	<input type="text" value="E"/>
Ops/Data	<input type="text"/>	Bureau IBM Sales	<input type="text" value="£20,000"/>	<input type="text" value="E"/>
Dev.	<input type="text"/>	Bureau Other Sales	<input type="text" value="-"/>	
Other	<input type="text"/>			
Growth Rate % p.a.	<input type="text" value="84"/>			
Geographical Category	<input type="text" value="M"/>	Sales Turnover Category	<input type="text" value="A"/>	

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM Sys 32	2			20,000	
TOTALS	X			20,000	

Bureau Type

Batch ☒
RCS ☐
Comprehensive ☐
Data Prep. ☐

Tick One Box Only

Specialties

General Commercial Accounting
.....
.....
.....
.....
.....

General Comments

Mainly custom tailored software using
IBM system 32 equipment.

COMPUTER BUREAU SUMMARY

Ref.
345

Company Kerr Computer Services Ltd

Parent Company -

Headquarters Town Greenock Area: Scotland

Telephone Number 0475 25371

Contact Name Title:

Managing Director D.S. McConnell

Base Year

1979

Total
Group
Sales

£1,000,000

E

Employment Total

70

Total
Bureau
Sales

£ 800,000

E

Ops/Data

Dev.

Other

Bureau
IBM
Sales

£ 800,000

E

Growth Rate % p.a.

Bureau
Other
Sales

£ 800,000

Geographical Category

SC

Sales Turnover Category

C

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 370/135	6	1		£800,000	
TOTALS	X			£800,000	

Bureau Type

Batch

RCS

Comprehensive

Data Prep.

☒
☐
☐
☐

Specialties

Manufacturing & Distribution

. DB OMP. . . RGS.

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Tick One Box Only

General Comments

COMPUTER BUREAU SUMMARY

Ref.
352

Company Laing Computing Services

Parent Company John Laing & Son Ltd

Headquarters Town Elstree Area: Herts

Telephone Number 207 - 2000

Contact Name P.A. White Title: Services Manager

Managing Director Roland Geary

Base Year	<input type="text" value="1979"/>	Total Group Sales	<input type="text" value="£2.9 M"/>	<input type="text" value="E"/>
Employment Total	<input type="text" value="135"/>	Total Bureau Sales	<input type="text" value="£1.8 M"/>	<input type="text" value="E"/>
Ops/Data	<input type="text" value="40"/>	Bureau IBM Sales	<input type="text" value="£1.8 M"/>	<input type="text" value="E"/>
Dev.	<input type="text" value=""/>	Bureau Other Sales	<input type="text" value=""/>	<input type="text" value=""/>
Other	<input type="text" value="95"/>			
Growth Rate % p.a.	<input type="text" value="15"/>			
Geographical Category	<input type="text" value="NH"/>	Sales Turnover Category	<input type="text" value="E"/>	

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 370/145	7	2	900	1,800,000	
TOTALS	X			£1,800,000	

Bureau Type

Batch ☐

RCS ☐

Comprehensive ☐

Data Prep. ☐

Tick One Box Only

Specialties

General Accounting & Payroll

.....

.....

.....

.....

General Comments

Off-Line Network and modest on-line facilities
(16 ports)

COMPUTER BUREAU SUMMARY

Ref.
362

Company

Lowndes Ajax Computer Services Ltd

Parent Company

Hill Samuel

Headquarters Town

Croydon

Area:

Surrey

Telephone Number

689 2244

Contact Name

Title:

Managing Director

P.N.W. Merrick

Base Year

1979

Total
Group
Sales

£4.00 M

E

Employment Total

145

Total
Bureau
Sales

£3.00 M

E

Ops/Data

29

Dev.

Bureau
IBM.
Sales

£3.00 M

E

Other

Growth Rate % p.a.

Bureau
Other
Sales

Geographical Category

SH

Sales Turnover Category

F

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
370/158-3	8	1	1.75	1.75	
370/155-2	7	1	1.25	1.25	
TOTALS	X			3.00	

Bureau Type

Batch

☒

RCS

☐

Comprehensive

☐

Data Prep.

☐

Tick One Box Only

Specialties

.. Financial ..
.. Insurance ..
.. General Accounting ..
.. COM ..
.. Database ..

General Comments

COMPUTER BUREAU SUMMARY	Ref. 368
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Company MANIF SERVICES LTD	
Parent Company Bolton Steam Shipping	
Headquarters Town Poole	Area: West
Telephone Number 02013 71117	
Contact Name A T Edgson	Title: M.D.
Managing Director	

Base Year	1979	Total Group Sales	£ 450,000	E
Employment Total	30	Total Bureau Sales	£ 250,000	E
Ops/Data	23	Bureau IBM Sales	£ 250,000	E
Dev.		Bureau Other Sales		
Other	7			
Growth Rate % p.a.				
Geographical Category	W	Sales Turnover Category	B	

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 360/30	3	1	200,000		
Data Prep		Misc	50,000		
TOTALS	X		250,000		

<p>Bureau Type</p> <p>Batch <input checked="" type="checkbox"/></p> <p>RCS <input type="checkbox"/></p> <p>Comprehensive <input type="checkbox"/></p> <p>Data Prep. <input type="checkbox"/></p> <p>Tick One Box Only</p>	<p>Specialties</p> <p>Insurance.. Shipping.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
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General Comments

COMPUTER BUREAU SUMMARY

Ref.
E27

Company
McConnells Computing Ltd

Parent Company
McConnells Advertising

Headquarters Town
Dublin Area: Eire

Telephone Number
0001 78 1544

Contact Name
George Strachan Title: Bureau Manager

Managing Director

Base Year

Total
Group
Sales

£100,000

Employment Total

10

Total
Bureau
Sales

£ 80,000

Ops/Data

Dev.

Other

Bureau
IBM
Sales

£ 80,000

Growth Rate % p.a.

Bureau
Other
Sales

Geographical Category

I

Sales Turnover Category

A

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 3742		1		£80,000	
Telex Sys 3	3	1			
TOTALS	X			£80,000	

Bureau Type

Batch

☒

RCS

☐

Comprehensive

☐

Data Prep.

☐

Tick One Box Only

Specialties

..General In House.....

..Advertising & Accounting...

..Services.....

.....

.....

General Comments

Only about 20% of computer time is sold externally

COMPUTER BUREAU SUMMARY

Ref.
384

Company

MPL

Parent Company

Headquarters Town

Cheltenham

Area:

West

Telephone Number

0242 37636

Contact Name

Title:

Managing Director

J. Bayston

Base Year

1979

Total
Group
Sales

£500,000

E

Employment Total

42

Total
Bureau
Sales

£300,000

Ops/Data

30

Dev.

Bureau
IBM
Sales

£300,000

Other

12

Growth Rate % p.a.

Bureau
Other
Sales

-

Geographical Category

W

Sales Turnover Category

B

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM Sys 32	2	3	60,000	180,000	
5110	1	1	10,000	10,000	
Sys 34	2	1	110,000	110,000	
TOTALS	X	5		300,000	

Bureau Type

Batch

☒

RCS

☐

Comprehensive

☐

Data Prep.

☐

Tick One Box Only

Specialties

Solicitors Accounts

Insurance

General Comments

COMPUTER BUREAU SUMMARY

Ref.
381

Company Douglas Moore Ltd

Parent Company -

Headquarters Town Kingston Area: Surrey

Telephone Number 549 2121

Contact Name J Dixon Title: Sales Manager

Managing Director R.A. Hazelton

Base Year	1979	Total Group Sales	£2,500,000 E
Employment Total	120	Total Bureau Sales	£1,550,000 E
Ops/Data	60	Bureau IBM Sales	£200,000 E
Dev.		Bureau Other Sales	
Other	60		
Growth Rate % p.a.			
Geographical Category	L	Sales Turnover Category	E

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
ICL 1901	3	3	50,000	450,000	
ICL 1903 A	5	1	900,000	900,000	
IBM 360/30	3	1	200,000	200,000	
TOTALS	X			1,550,000	

Bureau Type

Batch ☒
RCS ☐
Comprehensive ☐
Data Prep. ☐

Tick One Box Only

Specialties

Payroll & General Accounting
.....
.....
.....
.....
.....

General Comments

COMPUTER BUREAU SUMMARY

Ref.
388

Company

N D P S

Parent Company

Post Office

Headquarters Town

Moorfields

Area:

London City

Telephone Number

432 9258

Contact Name

J.R. Mabey

Title:

Sales Manager

Managing Director

Base Year

1979

Total
Group
Sales

£29 M E

Employment Total

12

Total
Bureau
Sales

£29 M E

Ops/Data

Dev.

Other

Bureau
IBM
Sales

£2½ M E

Growth Rate % p.a.

Bureau
Other
Sales

£26¾ M E

Geographical Category

L

Sales Turnover Category

K

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 370/168		1	2,250,000	2,250,000	
ICL Leo 326		10	500,000	5,000,000	
ICL System 4		13	1,000,000	13,000,000	
ICL 2480		7	1,000,000	7,000,000	
B 5500		2	750,000	1,500,000	
Gec 2050		4	300,000	300,000	
Gec 4080		2			
ICL 7503		7			
ICL 7905		6			
TOTALS	X			29,050,000	

Bureau Type

Batch

RCS

Comprehensive

Data Prep.

Tick One Box Only

Specialties

Real time Cargo Handling (Laces)

Time Sharing (IBM)

Research (B5500)

Giro

General Accounting

General Comments

Only about 5% of total revenue is external, hence external sales are about £1.5M. The IBM mainframe is used exclusively for a national interactive time-sharing network.

COMPUTER BUREAU SUMMARY

Ref.
396

Company
Orwell Data Services Ltd.

Parent Company
John Good & Sons Ltd.

Headquarters Town
Ipswich Area:
Suffolk

Telephone Number
0473 56523 or 221274

Contact Name
A. Lupton Title:
Operations Manager

Managing Director
J W Sears

Base Year

1979

Total
Group
Sales

£230,000

E

Employment Total

12

Total
Bureau
Sales

£170,000

E

Ops/Data

Dev.

Other

Bureau
IBM
Sales

£170,000

E

Growth Rate % p.a.

Bureau
Other
Sales

Geographical Category

A

Sales Turnover Category

A

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM Sys 34	2	1	110,000	110,000	
IBM Sys 32	2	1	160,000	60,000	
TOTALS	X			170,000	

Bureau Type

Batch

RCS

Comprehensive

Data Prep.

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☐
☐
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Specialties

Transport Industry

Freight Forwarding

Ship Agency

General Accounting

Tick One Box Only

General Comments

COMPUTER BUREAU SUMMARY

Ref.
397

Company

Osprey Computer Services Ltd

Parent Company

Headquarters Town

Romsey Hants

Area:

South

Telephone Number

0794 516777

Contact Name

Title:

Managing Director

Miss Rona Bassett

Base Year

1979

Total
Group
Sales

£220,000

E

Employment Total

20

Total
Bureau
Sales

£ 50,000

E

Ops/Data

6

Dev.

Bureau
IBM
Sales

£ 50,000

E

Other

14

Growth Rate % p.a.

Bureau
Other
Sales

Sales Turnover Category

Geographical Category

S

A

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM Sys 34	2	1		Bureau	
Sys 32	2	1		Revenue is	
				20% of Total	
				say	
				£50,000	
TOTALS	X				

Bureau Type

Batch

RCS

Comprehensive

Data Prep.

Specialties

.....
.....
.....
.....
.....

Tick One Box Only

General Comments

COMPUTER BUREAU SUMMARY

Ref.

428

Company

RHM Computing

Parent Company

Ranks Hovis McDougall

Headquarters Town

Harlow

Area:

Essex

Telephone Number

0279 26831

Contact Name

J. Slater

Title:

Marketing Executive

Managing Director

J. Ireland

Base Year

1979

Total Group Sales

£5.90 M

E

Employment Total

400

Total Bureau Sales

£3.30 M

E

Ops/Data

250

Dev.

Other

150

Bureau IBM Sales

£3.30 M

E

Growth Rate % p.a.

25

Bureau Other Sales

£

Geographical Category

NH

Sales Turnover Category

F

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 370/158	8	2	£1.65 M	£3.3 M	
TOTALS	X				

Bureau Type

Batch

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RCS

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Comprehensive

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Data Prep.

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Tick One Box Only

Specialties

Banking, Finance, Insurance

Food Manufacture/Distribution

COM

Sales & General Accounting

Stock Control

General Comments

Also many ICL 290 3's in the bakery outlets
80 locations linked by network to Harlow

COMPUTER BUREAU SUMMARY	Ref. 431
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Company Ross Computer Services Ltd.	
Parent Company	
Headquarters Town Cwnbran	Area: Wales
Telephone Number 06333 61126	
Contact Name J. Pratt	Title: Director
Managing Director G. Porter	

Base Year	1979		Total Group Sales	£500,000	E
Employment Total		31	Total Bureau Sales	£450,000	E
Ops/Data		30			
Dev.			Bureau IBM Sales	£450,000	E
Other					
Growth Rate % p.a.		25	Bureau Other Sales		
Geographical Category		W	Sales Turnover Category		B

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 360/40	5	1	400,000	400,000	
IBM 360/20	2	1	75,000	50,000	
TOTALS	X			450,000	

<p>Bureau Type</p> <p style="text-align: right;">Batch <input checked="" type="checkbox"/></p> <p style="text-align: right;">RCS <input type="checkbox"/></p> <p style="text-align: right;">Comprehensive <input type="checkbox"/></p> <p style="text-align: right;">Data Prep. <input type="checkbox"/></p> <p>Tick One Box Only</p>	<p>Specialties</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
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General Comments

COMPUTER BUREAU SUMMARY

Ref.
433

Company

RTZ Computer Services Ltd.

Parent Company

RTZ

Headquarters Town

Bristol

Area:

West

Telephone Number

0272 24181

Contact Name

Title:

Managing Director

R.G. Millar

Base Year

1979

Total
Group
Sales

£1,200,000

E

Employment Total

56

Total
Bureau
Sales

£ 900,000

E

Ops/Data

11

Dev.

Bureau
IBM
Sales

£ 800,000

E

Other

Bureau
Other
Sales

£ 100,000

E

Growth Rate % p.a.

35

Geographical Category

W

Sales Turnover Category

C

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 360/50	7	1	800,000	800,000	
PDP 11/40	4	1	100,000	100,000	
TOTALS	X			900,000	

Bureau Type

Batch

☐

RCS

☐

Comprehensive

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Data Prep.

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Tick One Box Only

Specialties

Facia Fixed Assets Accounting

 Congress Consolidation of Accounts

 FPS Financial Modelling

 MAPS Money & Profit Simulator

General Comments

COMPUTER BUREAU SUMMARY

Ref.
439

Company

Schroder Computer Services Ltd

Parent Company

Datema

Headquarters Town

London

Area:

City

Telephone Number

240 - 3434

Contact Name

B. Hodgson

Title:

Managing Director

Base Year

1979

Total
Group
Sales

£1,800,000

E

Employment Total

100

Total
Bureau
Sales

£1,000,000

E

Ops/Data

Dev.

Other

Bureau
IBM
Sales

£1,000,000

E

Growth Rate % p.a.

Bureau
Other
Sales

Geographical Category

W

Sales Turnover Category

D

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 370/148	7	1	1,000,000	1,000,000	
TOTALS	X			1,000,000	

Bureau Type

Batch

RCS

Comprehensive

Data Prep.

Tick One Box Only

Specialties

Financial Planning & Forecasting

Direct Mailing

Fixed Assets

APL Program Development

Portfolio Valuation

General Comments

Computer Centre is at Bristol

COMPUTER BUREAU SUMMARY

Ref.
447

Company

I P Sharp Associates Ltd

Parent Company

Headquarters Town

London

Area:

Central

Telephone Number

730 0361

Contact Name

Hazel O'Hare

Title:

Brand Manager

Managing Director

Base Year

1979

Total
Group
Sales

£1,500,000 E

Employment Total

40

Total
Bureau
Sales

£ 800,000 E

Ops/Data

Dev.

Other

Bureau
IBM
Sales

£ 800,000 E

Growth Rate % p.a.

60

Bureau
Other
Sales

Geographical Category

L

Sales Turnover Category

C

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
Interactive Terminals		200 at one time		£800,000	Hardware in is Toronto consists of Amdahl 470- V6-11. 700 parts are available to 42 branch offices worldwide. Giving an average of 16 per location.
TOTALS	X			£800,000	

Bureau Type

Batch

RCS

Comprehensive

Data Prep.

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Specialties

APL Timesharing

Multinational Database

Tick One Box Only

General Comments

COMPUTER BUREAU SUMMARY

Ref.
466

Company

Southwark Computer Services Ltd

Parent Company

Headquarters Town

London

Area:

City

Telephone Number

928 - 27111

Contact Name

Title:

Managing Director

Base Year

1979

Total
Group
Sales

£900,000

E

Employment Total

60

Total
Bureau
Sales

£600,000

E

Ops/Data

Dev.

Other

Bureau
IBM
Sales

£400,000

E

Growth Rate % p.a.

Bureau
Other
Sales

£200,000

E

Geographical Category

L

Sales Turnover Category

C

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 370/125-2	5	1	400,000	400,000	
PDP 11/70	6	1	200,000	200,000	
TOTALS	X			600,000	

Bureau Type

Batch

RCS

Comprehensive

Data Prep.

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Specialties

Accounting, Share Registration
.....

Shipping, Insurance.....

Name & Address Manipulation.....

QPAC for Payroll.....

.....

Tick One Box Only

General Comments

COMPUTER BUREAU SUMMARY

Ref.
472

Company

Star Computer Centre Ltd.

Parent Company

Headquarters Town

London

Area:

Central

Telephone Number

637 9741

Contact Name

Malcolm Cornish

Title:

Marketing

Managing Director

Base Year

1979

Total
Group
Sales

£700,000

G

Employment Total

35

Total
Bureau
Sales

£300,000

E

Ops/Data

Dev.

Other

Bureau
IBM
Sales

£300,000

E

Growth Rate % p.a.

Bureau
Other
Sales

Geographical Category

L

Sales Turnover Category

B

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
370/158 Mael 2000	8 2	2 40*			Computers owned by Thomson Holidays *The Mael systems are in customers premises installed on OEM basis. Software is developed by STAR.
TOTALS	X				

Bureau Type

Batch

RCS

Comprehensive

Data Prep.

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Specialties

Small Business, General

Accounting System

Tick One Box Only

General Comments

Developing new range of packages for DG.
Micronova. Also a word processing package.

COMPUTER BUREAU SUMMARY

Ref.
475

Company Studley Computer Services Ltd

Parent Company

Headquarters Town Studley Area: W. Midlands

Telephone Number 052785 3048

Contact Name Title:

Managing Director D.S. Moulson

Base Year	<input type="text" value="1979"/>	Total Group Sales	<input type="text" value="£100,000"/>	<input type="text" value="E"/>
Employment Total	<input type="text" value="5"/>	Total Bureau Sales	<input type="text" value="£ 50,000"/>	<input type="text" value="E"/>
Ops/Data	<input type="text"/>	Bureau IBM Sales	<input type="text" value="£ 50,000"/>	<input type="text" value="E"/>
Dev.	<input type="text"/>	Bureau Other Sales	<input type="text" value=""/>	<input type="text" value=""/>
Other	<input type="text"/>			
Growth Rate % p.a.	<input type="text"/>			
Geographical Category	<input type="text" value="M"/>	Sales Turnover Category	<input type="text" value="A"/>	

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM Sys 3	3	1			
TOTALS	X				

Bureau Type

Batch ☒

RCS ☐

Comprehensive ☐

Data Prep. ☐

Tick One Box Only

Specialties

Forecasting

Production Control

General Accounting

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.....

General Comments

COMPUTER BUREAU SUMMARY

Ref.
476

Company

Sun Alliance Computer Services

Parent Company

Sun Alliance & London Insurance Group

Headquarters Town

Birmingham

Area:

W. Midlands

Telephone Number

021 777 3283

Contact Name

A.J. Dancey

Title:

Ass. Manager

Managing Director

Base Year

1979

Total
Group
Sales

£5,000,000

E

Employment Total

Total
Bureau
Sales

£3,000,000

E

Ops/Data

Dev.

Bureau
IBM
Sales

£3,000,000

E

Other

Growth Rate % p.a.

Bureau
Other
Sales

Geographical Category

M

Sales Turnover Category

F

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 370/155	7	3	1,000,000	3,000,000	2 Mainframes in Horsham 1 in Birmingham
TOTALS	X				

Bureau Type

Batch

☒

RCS

☐

Comprehensive

☐

Data Prep.

☐

Tick One Box Only

Specialties

Insurance Brokers Accounting

Stock Recording

Invoicing

General Comments

Only about 10% of Bureau Activity is sold externally
(value say £300,000)

COMPUTER BUREAU SUMMARY

Ref.
483

Company

Systems Consultants Ltd.

Parent Company

Lloyds & Scottish Ltd

Headquarters Town

Edinburgh

Area:

Scotland

Telephone Number

031 332 0341

Contact Name

Title:

Managing Director

J.J. McCready (joint M.D.)

Base Year	<div>1979</div>	Total Group Sales	<div>£1,000,000</div>	<div>E</div>
Employment Total	<div>50</div>	Total Bureau Sales	<div>£ 800,000</div>	<div>E</div>
Ops/Data	<div></div>	Bureau IBM Sales	<div>£ 800,000</div>	<div>E</div>
Dev.	<div></div>	Bureau Other Sales	<div></div>	
Other	<div></div>			
Growth Rate % p.a.	<div>30</div>			
Geographical Category	<div>SC</div>	Sales Turnover Category	<div>C</div>	

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 370/158	8	1	800,000	800,000	
TOTALS	X			800,000	

Bureau Type

Batch

☐

RCS

☒

Comprehensive

☐

Data Prep.

☐

Tick One Box Only

Specialties

Insurance

.....

General Comments

COMPUTER BUREAU SUMMARY

Ref.
491

Company

Target Computer Services Ltd

Parent Company

Headquarters Town

London

Area:

North

Telephone Number

889 5556

Contact Name

Title:

Managing Director

D.J. Stern

Base Year

1979

Total
Group
Sales

£ 700,000

E

Employment Total

45

Total
Bureau
Sales

£ 350,000

E

Ops/Data

Dev.

Other

Bureau
IBM
Sales

£ 250,000

E

Growth Rate % p.a.

40

Bureau
Other
Sales

£ 100,000

E

Geographical Category

L

Sales Turnover Category

B

Machines

C
A
T

Qty

Est'd
Revenue
Each

Est'd
Total
Revenue

Geography/Plans

IBM Sys 3/6

3

1

250,000

Prime 400

4

1

100,000

TOTALS

X

350,000

Bureau Type

Batch



RCS



Comprehensive



Data Prep.



Tick One Box Only

Specialties

Mainly Commerce, insurance

Mailing.....

Subscription Accounting.....

Plant Hire.....

Fixed Assets Accounting.....

General Comments

COMPUTER BUREAU SUMMARY	Ref. 493
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Company	Teamco		
Parent Company	KS Teamco A/S & Co (Oslo)		
Headquarters Town	London	Area:	City
Telephone Number	405 9125, 242 1850		
Contact Name	D. Godfrey	Title:	
Managing Director	B. McKenena		

Base Year	1979	Total Group Sales	£1 M E
Employment Total	26	Total Bureau Sales	£1 M E
Ops/Data	<input type="text"/>	Bureau IBM Sales	£1 M E
Dev.	<input type="text"/>	Bureau Other Sales	<input type="text"/>
Other	<input type="text"/>		
Growth Rate % p.a.	35		
Geographical Category	L	Sales Turnover Category	D

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
RJE Terminals		Est'd 10	25,000	250,000	ITEL AS5/3 with 96 Ports Located in London Running under two operating system VM OS/HAS P
TOTALS	X				

<p>Bureau Type</p> <p>Batch <input type="checkbox"/></p> <p>RCS <input checked="" type="checkbox"/></p> <p>Comprehensive <input type="checkbox"/></p> <p>Data Prep. <input type="checkbox"/></p> <p>Tick One Box Only</p>	<p>Specialties</p> <p>IMS Accounting Package</p> <p>RJE Facilities</p> <p>.....</p> <p>.....</p> <p>.....</p>
---	---

General Comments

TEAMCO supply computer time to 6 other bureaux.

COMPUTER BUREAU SUMMARY

Ref.
496

Company Telford Computing Ltd

Parent Company

Headquarters Town Telford Area: West Country

Telephone Number 0952 51641

Contact Name B. Jones Title: Senior Systems Analyst

Managing Director P.F. Rass

Base Year

1979

Total
Group
Sales

£260,000

E

Employment Total

17

Total
Bureau
Sales

£160,000

E

Ops/Data

2

Dev.

9

Bureau
IBM
Sales

£160,000

E

Other

6

Growth Rate % p.a.

Bureau
Other
Sales

Geographical Category

W

Sales Turnover Category

A

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM Sys 3/15	3	1	160,000	160,000	
TOTALS	X				

Bureau Type

Batch

☒

RCS

☐

Comprehensive

☐

Data Prep.

☐

Tick One Box Only

Specialties

Membership Accounting

Agriculture Pedigree Registration

Charities - Deeds of Covenant

General Accounting

Microfiche, Phototypesetting

General Comments

COMPUTER BUREAU SUMMARY		Ref. 499
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Company		THI Group Services Ltd
Parent Company		Trafalgar House Ltd (60%)
Headquarters Town	Croydon	Area: Surrey
Telephone Number		689 2266
Contact Name	Title:	
Managing Director		

Base Year	<div>1979</div>	Total Group Sales	<div>£900,000</div> <div>E</div>
Employment Total	<div>58</div>	Total Bureau Sales	<div>£400,000</div> <div>E</div>
Ops/Data	<div></div>	Bureau IBM Sales	<div>£400,000</div> <div>E</div>
Dev.	<div></div>	Bureau Other Sales	<div></div>
Other	<div></div>		
Growth Rate % p.a.	<div>15</div>		
Geographical Category	<div>SH</div>	Sales Turnover Category	<div>B</div>

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 370/125	5	1			
TOTALS	X				

<p>Bureau Type</p> <p>Batch <input checked="" type="checkbox"/></p> <p>RCS <input type="checkbox"/></p> <p>Comprehensive <input type="checkbox"/></p> <p>Data Prep. <input type="checkbox"/></p> <p>Tick One Box Only</p>	<p>Specialties</p> <p>General Accounting</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
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General Comments

Only about 10% of Revenue is generated externally
(say £40,000)

COMPUTER BUREAU SUMMARY

Ref.
507

Company Tylin Management Systems Ltd

Parent Company Tate & Lyle Refineries

Headquarters Town Croydon Area: Surrey

Telephone Number 680 2323

Contact Name D.M. Shaw Title: Marketing Manager

Managing Director B.R. Mitchell

Base Year

1979

Total
Group
Sales

£1,900,000 E

Employment Total

118

Total
Bureau
Sales

£1,000,000 E

Ops/Data

50

Dev.

Bureau
IBM
Sales

£1,000,000 E

Other

68

Growth Rate % p.a.

Bureau
Other
Sales

Geographical Category

SH

Sales Turnover Category

D

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
IBM 370/148	7	1	1,000,000		
TOTALS	X				

Bureau Type

Batch

☒

RCS

☐

Comprehensive

☐

Data Prep.

☐

Tick One Box Only

Specialties

Direct Mailing

.....

.....

.....

.....

.....

General Comments

50% of Business is external (£550,000) of which
one third (£180,000) is direct mail

COMPUTER BUREAU SUMMARY

Ref.
510

Company

Unilever Computer Services Ltd

Parent Company

Unilever

Headquarters Town

Wembley

Area:

London N W

Telephone Number

903 1414

Contact Name

R.M. Bain

Title:

Head of Nat. Marketing

Managing Director

Base Year

1979

Total
Group
Sales

£13.0

E

Employment Total

550

Total
Bureau
Sales

£ 8.0 M

E

Ops/Data

170

Dev.

Bureau
IBM
Sales

£7.55 M

E

Other

280

Growth Rate % p.a.

27

Bureau
Other
Sales

£ .45 M

E

Geographical Category

L

Sales Turnover Category

H

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
ITFL AS/5	9	3	2.00	£6.00 M	
360/65	8	1	1.00	1.00 M	
360/40	5	1		0.40	
360/30	3	1		0.15	
B3500	5	1		0.25	
B2700	4	1		0.20	
TOTALS	X			£.00	

Bureau Type

Batch

☐

RCS

☐

Comprehensive

☒

Data Prep.

☐

Tick One Box Only

Specialties

Marketing Database

Project Engineering Database

Business Planning

Portable Data captive terminals

& housing

General Comments

COMPUTER BUREAU SUMMARY

Page 527

Company

Wellorax Group

Parent Company

The Wellorax Group

Headquarters Town

Kingston

Area:

London West

Telephone Number

549 8933

Contact Name

Graham Hallett

Title:

Sales Director

Managing Director

Base Year

1979

Total Group Sales

£ 700,000

G

Employment Total

70

Total Bureau Sales

£ 300,000

G

Ops/Data

40

Dev.

Bureau IBM Sales

£ 300,000

G

Other

Bureau Other Sales

Growth Rate % p.a.

Bureau 30%, word processor 50%

Geographical Category

L

Sales Turnover Category

B

Machines

C
A
T

Qty

Est'd
Revenue
Each

Est'd
Total
Revenue

Geography/Plans

IBM Sys 3/12

3

1

200,000

200,000

W P 32

2

1

Sys 34

2

1

5110

1

1

6640

1

1

MC82

1

1

100,000

100,000

Upgrade system 3/12 to system 38 next year.

TOTALS

X

6

300,000

Bureau Type

Batch



RCS



Comprehensive



Data Prep.



Tick One Box Only

Specialties

IBM Compatible Word Processing

Mail.Promotion, Hospital Patient Ledger, Subscription Accounting,

Insurance Policy Administration,

System 3 Word Processor Data Exchange/Conversion

General Comments

Three main companies: Wellorax Ltd - Bureau & facs. Mgt; Eurologic - Software; Word crunchers for Word Processing. Revenue from FM is about £200,000 pa, from Software about £200,000 and £100,000 from Word Processing.

COMPUTER BUREAU SUMMARY					Ref. 550
Company X Calibur Computing Services					
Parent Company Benton & Bowles					
Headquarters Town		London		Area: Central	
Telephone Number		353 8201			
Contact Name		P.W.A. Edwards-Rebbitt		Title: Director	
Managing Director		L.A. Reed			

Base Year	<div style="border: 1px solid black; padding: 2px;">1979</div>	Total Group Sales	<div style="border: 1px solid black; padding: 2px;">£750,000</div>	G
Employment Total	<div style="border: 1px solid black; padding: 2px;">30</div>	Total Bureau Sales	<div style="border: 1px solid black; padding: 2px;">£600,000</div>	G
Ops/Data	<div style="border: 1px solid black; padding: 2px;"></div>	Bureau IBM Sales	<div style="border: 1px solid black; padding: 2px;">£600,000</div>	G
Dev.	<div style="border: 1px solid black; padding: 2px;"></div>	Bureau Other Sales	<div style="border: 1px solid black; padding: 2px;"></div>	
Other	<div style="border: 1px solid black; padding: 2px;"></div>			
Growth Rate % p.a.	<div style="border: 1px solid black; padding: 2px;">20</div>			
Geographical Category	<div style="border: 1px solid black; padding: 2px;">L</div>	Sales Turnover Category		<div style="border: 1px solid black; padding: 2px;">C</div>

Machines	C A T	Qty	Est'd Revenue Each	Est'd Total Revenue	Geography/Plans
Harris RJE Terminal		1	600,000 Given		The 370/145 was replaced in October '78 by a Harris RJE terminal linked by 2400 band line, to Teamco's Ite1 AS5,
TOTALS	X				

<p>Bureau Type</p> <p style="margin-left: 40px;">Batch <input checked="" type="checkbox"/></p> <p style="margin-left: 40px;">RCS <input type="checkbox"/></p> <p style="margin-left: 40px;">Comprehensive <input type="checkbox"/></p> <p style="margin-left: 40px;">Data Prep. <input type="checkbox"/></p> <p style="margin-left: 20px;">Tick One Box Only</p>	<p>Specialties</p> <p style="margin-left: 20px;">. Advertising</p> <p style="margin-left: 20px;">. Direct Mail</p> <p style="margin-left: 20px;">. Hotel Accounts</p> <p style="margin-left: 20px;">.</p> <p style="margin-left: 20px;">.</p>
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General Comments

A subsidiary of X Calibur is now selling data general Minis using Computer Plan's packages

APPENDIX - C

CAMP INDUSTRY INDEX

COMPANY NAME	INDUSTRY MARKETS											
	MANUFACTURING	TRANSPORTATION	UTILITIES	DISTRIBUTION	BANKING/FINANCE	INSURANCE	MEDICAL/HOSPITAL	EDUCATION	GOVERNMENT	OTHER	DIRECTORY	HIGHLIGHTS
AGB COMPUTER										*	o	
AMBA SOFTWARE											o	
ANGLIA DATA (UCSL)	*				*						o	o
ASTRAL COMPUTER					*	*					o	
AUTOMATION SERVICES	*				*						o	
BARBICAN COMPUTER					*						o	
BLUE CIRCLE		*								*	o	
BOC DATASOLVE					*					*	o	o
BOEING COMPUTER	*				*						o	o
G.H. BROWNBILL					*						o	
BURY COMPUTER				*	*						o	
CARA					*						o	
CDC DATA SERVICES				*	*						o	o
C.E.G.B. COMPUTING										*	o	
CENTREFILE					*					*	o	o
COMPOWER	*	*	*	*	*	*	*	*	*		o	o
COMPUTIME LTD	*										o	
CRL BUREAU											o	
CSS INTERNATIONAL										*	o	
DATA COMPUTING											o	
DATA PUNCH					*					*	o	
DATA SERVICES	*										o	
DATASTREAM					*						o	
DATA TRANSFER											o	
DENCO (HOLDINGS)	*				*						o	
DONOVAN DATA				*							o	
EASTERN COMPUTER (GEEST)				*						*	o	o
EJV DATA										*	o	
EXTEL COMPUTING					*					*	o	

COMPANY NAME	INDUSTRY MARKETS											
	MANUFACTURING	TRANSPORTATION	UTILITIES	DISTRIBUTION	BANKING/FINANCE	INSURANCE	MEDICAL/HOSPITAL	EDUCATION	GOVERNMENT	OTHER	DIRECTORY	HIGHLIGHTS
FOSSE COMPUTER				*							o	
GEC-MIDLAND			*								o	
GMS COMPUTING					*					*	o	
GOR-RAY					*						o	
GRANDMET INFORMATION										*	o	
GROVE COMPUTER											o	
HADRIAN COMPUTER				*						*	o	
HOSKYNs GROUP	*	*		*	*			*		*	o	o
IBM DATA	*	*	*	*	*	*	*	*	*	*	o	o
JASERVE				*							o	
JBS COMPUTER											o	
KERR COMPUTER	*			*							o	
LAING COMPUTING											o	
LOWNDES AJAX	*				*	*					o	o
MANX COMPUTER										*	o	
McCONNELLS SOFTWARE	*										o	
DOUGLAS MOORE											o	
MPL COMPUTERS				*	*					*	o	
NDPS	*	*		*	*	*	*	*			o	
ORWELL DATA		*									o	
OSPREY COMPUTER											o	
RHM COMPUTING				*	*					*	o	
ROSS COMPUTER										*	o	
RTZ COMPUTER											o	
SCHRODER					*					*	o	
I.P. SHARP					*						o	
SOUTHWARK COMPUTER					*	*			*	*	o	
STAR COMPUTER	*	*	*	*	*	*	*	*	*	*	o	
STUDLEY COMPUTER	*										o	

[illegible]

APPENDIX - D

CAMP APPLICATIONS INDEX

COMPANY NAME	APPLICATIONS MARKET						
	GENERAL BUSINESS	SCIENTIFIC/ENGINEERING	SPECIALITY	UTILITY	OTHER	DIRECTORY	HIGHLIGHTS
AGB COMPUTER			*			o	
AMBA SOFTWARE					*	o	
ANGLIA DATA (UCSL)	*		*			o	o
ASTRAL COMPUTER	*		*			o	
AUTOMATION SERVICES	*					o	
BARBICAN COMPUTER	*					o	
BLUE CIRCLE		*	*			o	
BOC DATASOLVE	*	*				o	o
BOEING COMPUTER	*		*			o	o
G.H. BROWNBILL	*					o	
BURY COMPUTER	*					o	
CARA	*	*			*	o	
CDC DATA SERVICES	*	*			*	o	o
CENTREFILE	*	*	*			o	o
COMPOWER	*					o	o
COMPUTIME LTD	*					o	
CRL BUREAU	*					o	
CSS INTERNATIONAL		*	*			o	
CYPHER COMPUTERS	*					o	
DATA COMPUTING						o	
DATA-LINK	*		*			o	
DATA PUNCH	*		*			o	
DATA SERVICES	*					o	
DATASTREAM			*			o	
DATA TRANSFER			*			o	
DELTA COMPUTER	*					o	
DENCO (HOLDINGS)	*		*		*	o	
DONOVAN DATA	*		*			o	
EASTERN COMPUTER (GEEST)	*	*	*			o	o

<div>APPLICATIONS MARKET</div> <div>COMPANY NAME</div>	GENERAL BUSINESS	SCIENTIFIC/ENGINEERING	SPECIALITY	UTILITY	OTHER	DIRECTORY	HIGHLIGHTS
EJV DATA			*			o	
EXTEL COMPUTING	*		*			o	
FOSSE COMPUTER	*					o	
GEC-MIDLAND	*	*	*			o	
GMS COMPUTING	*		*			o	
GOR-RAY	*		*			o	
GRANDMET INFORMATION	*		*			o	
GROVE COMPUTER	*					o	
HALLMARK	*		*		*	o	
HOSKYNs GROUP	*		*			o	o
IBM DATA	*	*	*	*	*	o	o
JASERVE	*					o	
JBS COMPUTER	*					o	
KERR COMPUTER	*		*			o	
LAING COMPUTING	*					o	
LOWNDES AJAX	*		*			o	o
MANIF SERVICES	*		*			o	
MCCONNELLS SOFTWARE	*					o	
DOUGLAS MOORE	*					o	
MPL COMPUTERS	*		*			o	
NATIONAL DATA P.S.	*	*				o	
ORWELL DATA	*		*			o	
OSPREY COMPUTER	*					o	
RHM COMPUTING	*					o	
ROSS COMPUTER						o	
RTZ COMPUTER	*					o	
SCHRODER			*			o	
I.P. SHARP	*					o	
SOUTHWARK COMPUTER	*					o	

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APPENDIX - E

IBM BUREAUX - HIGHLIGHTS

BOC

BOEING

CDC

CENTREFILE

COMPOWER

HOSKYNS

IBM

LOWNDES-AJAX

UCSL

COMPANY HIGHLIGHT

BOC

BOC DATASOLVE
Datasolve House
99 Staines Road West
Sunbury-on-Thames
Middx.
Tel. (76) 85566
Tlx. 8811720 .

C. Wood
Managing Director

THE COMPANY

- The BOC Datasolve group, one of the largest computer services organisations in Europe, began in a small way in 1971 and now runs 14 data centres around the country, with more to be added this year. It has 16 principal mainframes, including some of the largest and most sophisticated systems from ICL, IBM and Amdahl.
- The group now has more than 1,000 regular customers. Turnover is approaching £13 million.
- BOC Datasolve evolved from the internal computer operations of the British Oxygen Company. In 1971, BOC decided to sell spare time on its IBM equipment and gradually that developed into a conventional bureau operation, with the group in-house computing needs being met more or less on the same basis as those of external customers.
- In 1973, the Sanaco Birmingham-based bureau subsidiary was acquired giving BOC a Honeywell 615 and, in the same year, the dual processor 370/158 was ordered. The major development followed in the next year with the purchase of Datasolve International. Datasolve was a sizeable operation at the time - it was owned by Rothchilds and took to the BOC bureau plenty of ICL equipment, as well as some 360's.
- The two operations came under BOC Computer Services Division and at that time BOC Computer Centres had a turnover of £2.3 million, including BOC usage and Datasolve International had a turnover of

£1.8 million. In 1975, the management structure was unified under the name of BOC Datasolve Ltd.

- The result was the merger of a number of bureaux names from the past, as Datasolve International had been doing its own acquisition for many years before the BOC takeover. Today, BOC Datasolve has superceded all the following names - Annfield, Camden, Computeraid, Concord, Datasolve (and Datasolve Manchester), Devitt, Electra, Kingsway, Sanaco and Wedd.
- The offices house their own computers but also have RJE and local-call rates for time-sharing facilities on other BOC Datasolve machines.

TURNOVER AND STAFF GROWTH

- The company has about 800 staff, divided between marketing, sales and support functions, including programmers, systems analysts, consultants, operations staff, data preparation, teleprocessing, finance and administration.

- Turnover in £M

	BOC Datasolve	BOC Computer Services Division
1974/5		£7
1975/6		£10
1976/7	£9.6	£15
1977/8	£13	£21

SYSTEMS HARDWARE

- BOC Datasolve has one of the longest hardware lists in the U.K. of any independent bureau.
- The large mainframe includes IBM 370/158 mp, an ICL 2970, an Amdahl V6 a Honeywell 66/07 and other IBM, ICL 2903, 2904 and 1900 machines.

• Terminals

BOC Datasolve can generally connect any terminal at any line speed but its approach is much more structured than this in practice. Its equipment has been bought so that the main items, the 2970 configuration, the dual-processor 370/158, and the Level 66, give the user a wide choice of machines.

The bureau also considers different machines suited to different methods of working and different applications. This has an effect on which terminals can most sensibly be applied to which mainframes.

The 2970 is intended for RJE connections using up to 9,600 baud lines to ICL 7502 or 7503 terminals. Moving up market, it is also suitable for connection to local 2903 or 2904 processors on a customer's site, typically to replace an older 1900 and to communicate with 2970, 370/158 or V6. On the other hand, any Teletype-compatible device can be connected for interactive time-sharing.

The dual 370/158 is also aimed at the RJE market. Any IBM device can be connected, as can the usual IBM-compatible terminals, like those from Data 100 and the DCT 132. Moving again to the top of the market, Ventek Datapoint minis can be attached as local-site processors at a customer installation and BOC Datasolve has written software specifically for users who wish to have the Ventek Datapoint in-house but connected to the bureau mainframe. For interactive time-sharing the IBM 2741 is the sole option, though any Teletype-compatible device can also be connected for TSO and APL usage.

The Amdahl 470/V6 is used in the same way as the 370/158 configuration but with more emphasis on combined RJE/interactive services.

The Honeywell 66/07 is targeted at the interactive time-sharing market. Typically, any Teletype-compatible device operating at, say 10 or 30 cps can be attached to it.

The heaviest applications usage is from the dual 370/158 configuration. Fifty to one hundred RJE terminals are hooked on to

it each day and so are another 50-100 terminals for interactive use. The 66/07 already has some 20 interactive users connected daily.

- Languages

Cobol and Fortran appear to be the choice of most BOC Datasolve users.

Moderate usage is reported for PL/1 on the IBM configuration. Plan on the 1900 machines and APL on the IBM configuration.

Basic and the other Assembler languages on all machines have less usage.

Compilers are available for most languages. For instance, RTL/2, Coral 66 and Algol 60 are all available. It is not BOC Datasolve policy to support "everything under the sun" with the same degree of professionalism as it does the more popular items, so a customer can have practically any other compiler if he knows how it works.

KEY PRODUCTS AND SERVICES

BOC Datasolve has split its applications packages into three main areas - business systems, which currently represent the "major strength", management systems and engineering systems. The two latter groups are regarded as "developing areas".

- Business Systems

These are based on Total Accounting Service (TAS). This is a 'top-down' system, inasmuch as it exists primarily to provide management information from a central database. From this central pool is siphoned the necessary information to feed packages dealing with lower-level management functions such as accounting, ledgers and financial reporting.

The bureau lacks no package which a company might need for running its business. It is run on the IBM system using either

batch or RJE.

BOC Datasolve is very much aware of the existence of minis and the threat they can pose bureaux, many users opting for the cheaper minis with their attractive possibilities for distributed processing. However, the user may not be familiar with any other hardware than the terminal and will probably not have experience of managing in-house software projects. There is also the problem of company demands overrunning the processing power of the mini.

BOC Datasolve offer the solution through Ventek Datapoint minis for in-house distributed processing. Software is provided for all the usual accounting and business functions so the user has all those things that a mini-computer should give him.

The software is written to interface to TAS on the mainframe and the Datapoints become simple front-ends for the dual-processor 370's when data needs to be processed by the more powerful TAS functions - the establishment and interrogation of a central database would be a case in point.

● Management Systems

These are run on IBM, ICL and Honeywell systems. They cover financial planning, modelling, databases and mathematical programs such as linear programming statistics. Of these, database and modelling are the most important from the point of view of bureau income.

IMS is used for heavy corporate work on the dual 370/158. It can be used "raw" or as AIMS - a special subset for production control and manufacturing - and CO-OP - for on-line order processing.

On the IBM machines, the "medium" database consists of the Mathematica RAMIS. In the ICL market, Datasolve has opted for IDMS and transaction processing to a database. For the first year, the 2970 was used mainly for development work, but today, the

of the 5 x 27 version of VME/B has contributed a great deal to this development by adding greater resilience and reliability to the service.

As for lightweight DBMS, BOC Datasolve is developing an interactive database manager for on-line usage on the Honeywell 66/07. It is intended to be a highly responsive management service which permits users to tailor a standard system to fit their own needs at a relatively low cost.

Financial planning and modelling systems are available on the 66/07 and the IBM machines. On the 66/07, a financial planning system has been written in-house to integrate with that database manager as a single product. One of the key advantages of the 66/07 services is so much of it has been written by BOC Datasolve so it might be possible to reach an agreement that the user may take away copies of any software he has been working with if he decides to buy his own in-house machine.

On the 370/158's the system is APL-based. "Raw" APL access is available for user program development and there are existing APL products which can be extended by the user's own programming.

The bureau also has specialist packages for financial, banking and other specialised markets. BOC Datasolve is the exclusive agent for Sim-Corp, a Danish organisation which specialises in writing APL financial modelling systems in this area.

● Engineering Systems

These are run on the IBM equipment and divide into four areas:

- project management: PERT
- stress analysis: McAuto products such as STRUDL and NASTRAN
being the main ones
- off-shore: oil platform design and development, oil reservoir simulation
- graphics: such as McAuto FASTDRAW which uses Tektronix displays.

- Other Services

- Systems and programming with consultancy support accounts for 3% of turnovers
- Micrographics division is a COM centre based in central London but offering services to all BOC Datasolve customers.
- The other service of the group is facilities management which assists the growth of the Company. BOC Datasolve has long had a policy of growth by acquisition either through acquiring other bureaux or other companies' computer operations. Where the latter case has occurred, BOC Datasolve has continued to handle that company's data processing needs on a facilities management basis with the bureau staff servicing and operating a computer, probably still located at an possibly still owned by the company concerned.
- This has given BOC Datasolve some strategically-sited machines which have a single important user on them. From the local bases it is feasible to recruit extra staff there and instal a multiplexer and RJE links, when appropriate, to the Company's major computer centres. The local computer facility can then be the basis for a local computer bureau. The result in each case is an additional data centre for BOC Datasolve with at least one good customer and the prospect of easy expansion to obtain others for its network.
- Facilities management forms part of the Company's growth plan.

COMPANY HIGHLIGHT

BOEING

COMPANY HIGHLIGHT

BOEING COMPUTER CENTRES LIMITED

St. Martins House

31, 35 Clarendon Road

Watford

Herts. WD1 1JA

P.C. HOOPER

Managing Director

THE COMPANY

- The parent company is Boeing Computer Services.
- Boeing Computer Centres limited is divided into two divisions: A Commercial Division and a Time Sharing Division. The Commercial Division at Watford operates an ICL 1904S running in batch mode and the Time Sharing Division at Luton operates a Prime 400 offering an interactive accounting service, together with time-sharing and programme development

KEY PRODUCTS AND SERVICES

- The main applications on the 1904S can be listed under the following headings:

Financial and Accounting

Costing and Estimating; Fixed Assets; Management Accounting and Budgetary Control; Nominal Accounting; Order Control; Payroll and Analysis; Purchase Accounting; Sales Accounting; Sales Analysis; Stock Control and Evaluation.

Planning:

Financial Modelling and Forecasting; Project Evaluation and Control; Market Research.

Engineering and Production

Plant Hire and Accounting; Production Planning, Loading, Scheduling and Control.

Software

Programming Aids and Utilities for 1900 series.

Miscellaneous:

Information retrieval and indexing; Mailing, labelling and membership subscription accounting; Personnel Records; Type Setting; Tapes for microfiche; and Property Management.

Data Preparation:

Card punching, paper tape and key-to-disc.

Interactive Business Service:

This service supplies the user with on-line ledgers and costing system for a fixed monthly fee. This allows data entry, file enquiry and report generation, as well as normal accounting functions to terminals in the users offices. Route planning, vehicle scheduling and vehicle loading software are also available.

- The Mainstream Division:

The service supplied by this Division are: Financial planning and modelling; Production Planning; Budgetting; General time-sharing. The division utilises the following packages: EIS (Executive Information Systems); Tab/apl ;APL; Easytrieve; Inquire; Project/2 etc.

- Other Equipment

IBM 370/168

CDC Cyber 174 (via terminal links to parent company).

Terminals

Most medium and low speed terminals can be supported (10 to 120 CP's plus 4800 baud synchronous).

- Staff

The company employs around 70 staff in the U.K.

- Turnover

Boeing expect their turnover to exceed one million pounds in the current year and to treble over the next two years

COMPANY HIGHLIGHT

CDC

COMPANY HIGHLIGHT

CDC Data Services/UK
Wells House
77-79 Wells Street
London W1

J H Ward
Managing Director
Total Staff: 135

Tel: (01) 637 2171

- CDC Data Services/UK is owned by Control Data Corporation and is one of the three major divisions into which CDC is split in the UK, the others being Systems and Peripherals and Financial Services and Education.
- Data Services itself is split into three divisions each offering its own service.

- Data Processing Services:

This is an IBM based system offering UK, Netherlands and Belgium a selection of business packages, mainly in the commercial field.

- CALL-CDC

This is a management time-sharing service with emphasis on the needs of top management of major companies who need to centralise information on an interactive basis. This network interfaces both with the European and US Control Data Computer Network.

- CDC Cyber-Services:

This is aimed at the scientific and engineering user and is a batch, remote batch and time-sharing system.

TURNOVER AND STAFF GROWTH

- Around 30% of CDC's turnover worldwide is in the Data Services Division.
- Worldwide CDC's bureaux business produced \$298M excluding programming and consultancy.
- CDC Data Services/UK has around 135 employees in UK.
- Support staff per unit turnover is above average because of the close relationship between Data Services and the Professional Services Division.
- Both turnover and staff have kept abreast of sales growth for the industry.
- The bureau is in the process of heavy staff recruitment to meet aggressive growth predictions into the 1980's.

SYSTEMS HARDWARE

- CDC Data Services CDC based services (Cypher Service) runs on an internationally linked network of 26 machines including the CDC 6600, 7600 and the Cyber 170 Series. Some specialist applications e.g. in the nuclear field can be assessed by satellite.
- The IBM based service has an IBM 360/65 (15MB) at East Barnet which is the access point for the CALL/CDC to 9 x IBM 370/158s in the US.

PRODUCTS

- Cyber Services offers over a thousand programs to address management and technical problems including structural analysis/piping/civil engineering

Management Sciences
Electrical Engineering
Database Management Systems
Graphics
Transport and vehicle scheduling
Financial Analysis

- The fastest growing application is IFPS (Interactive Financial Planning System) which addresses the problem of managers communicating with their DP staff, facilitating the assessment of alternative options for managers who do not have the time to learn complicated formats.
- CALL/CDC has MINI - MIS - management database system for time-sharing usage.
- PICTURE-PAC management graphics
- TIMEPACK 11 - sophisticated time series forecasting
- PROFIT 11 - planning and budgetting.

Most of these were developed largely under contract for control data by US software houses.

- DPS has
 - General sales/picture ledgers
 - Invoicing
 - Stock Control
 - Payroll

CDC claim they will soon integrate all these applications into one package. Except for payroll, all the above packages were developed outside.

In-house systems include:

Mailing, Publishing, Subscription Accounting, Advertising, Marketing and Project Management and costing packages.

- IN DPS application packages are said to account for only 25% of CDC Data Services/UK revenue. 50% is said to come from custom made or customised packages.

- Around 15% of revenue comes from consultancy.
- Education Services

Control Data Institute, the educational division of Control Data Ltd provides a comprehensive range of computer training services from basic entry to the highest level of advanced technology. These services are available to industry or the general public as well as CDC.

- 90% of CDI's trainees are sponsored by the UK Government Training Services Agency under the Training Opportunities Scheme (TOPS).

PRODUCT AND MARKETING STRATEGY

- It is CDC's intention to grow with a balance of social contribution and commercial profitability.
- They intend to enhance the research, engineering, industrial and commercial capabilities of the UK, contributing to the export drive and thus balance of payments.
- Control Data's experience in Research and Development will continue to be available to UK DP users.

COMPANY HIGHLIGHT
CENTREFILE

COMPANY HIGHLIGHT

CENTRE FILE LTD.,
75 Leman Street
London E1 8EX

Managing Director
R.R. BENNIE

Tel: (01) 488 3131

THE COMPANY

- Centre file is a major UK batch and remote computing services vendor which began in 1965, and is a wholly owned subsidiary of National Westminster Bank. It has equal emphasis on interactive and batch business with Remote batch services accounting for a small 10% of the revenue, currently, but represent an increasing proportion of Centre file's business.
- The company's major strength is its link to National Westminster with the latter's 3,500 branches in the UK. These are invaluable as a collection and distribution network. The bank also serves as a simili-marketing force for Centre file's services with significant referrals of new business coming from the Banking network.
- Other strong points are the stability provided by the financial backing of Natwest, the good reputation of Centre file in the Finance sector and the wide spread of (2000) small accounts that the company services, allied with a few secure, very large accounts.
- The main weakness of Centre file, and one which has had a significant impact on the company's profit performance, is the constraint applied by the UK Government in price increases, (which in Centre file have not followed the growing wage bill). Another relative weakness has been that the significant business achieved through the Law Society's time recording service license is again not susceptible to pricing changes without the body's approval (i.e. control is not entirely in the hands of Centre file).

ORGANISATION

- The company reports to the National Westminster board through the "Related Banking Services" Division.

AFFILIATIONS

- Centre file has the UK-nationwide license from the Law Society for the time recording service but has licensed a small Scottish Company to offer it in Scotland.
- Similarly, Merkantildata in Norway is using the same system for the Norwegian market.

KEY PRODUCTS AND SERVICES

- Centre file is basically not in the general time-sharing market, but offers specific services to the financial, banking and legal marketplaces.
- Industry-specific packages form the basis of Centre file's marketing activity (e.g. the building societies-HOUSEMASTER package, the Stockbroking service, legal profession time accounting etc). Centre file's prime source of income is the payroll service (1300 + users) where the problem is not so much that of finding business, but handling the increasingly large volume of it that is coming Centre file's way.
- Relatively new services are the Sales and Nominal/Purchase Ledger packages.
- Captive revenue (with Natwest) has always been a low percentage of the company's revenue. It peaked at 7.5% and is falling rapidly. In 1977 this revenue was only 5% of the total. Essentially this is composed of Natwest's payroll and one-off jobs for the overseas security department. (ASSET service).

● Activities by major groups are as follows:

Centre file Ltd. :

- Professional Services
- Stockbrokers Services
- Building Societies
- Payroll
- Nominal, bought and sold ledgers
- Diners Club
- SMMT (Monthly Analysis of new Motor Vehicle Registrations)

Centre File Northern :

Westinghouse Road,
Trafford Park, Manchester

- Payroll
- Civil Engineering
- PERT
- Order Processing/Inventory Control

Management Computing Services Ltd. : Warner House

- Book publishers
- Hire purchase
- Instalment Credit
- Order Processing
- Department Stores

Centre file Data Preparation :

- Data Preparation
- OCR
- Key/disk

FINANCIAL ANALYSIS

- Centre file has deliberately depreciated its computer equipment over 5 years (approximately £ $\frac{1}{4}$.6m per year) which has had a noticeable effect on the financial performance.
- Key financial history follows:

Financial Analysis by Service Category (£ 000)

	<u>1976</u>	<u>1977</u>
<u>Total revenue</u>	<u>4,951</u>	<u>8,100</u>
o Interactive	2,240	3,600
o Batch	2,211	3,600
o Remote Batch	500	900

- There is a strong tendency for some large batch accounts to move to remote batch (e.g. Diners Club, SMMT) producing a rapid growth in that area. From a 1977 total of 11%, this is expected to grow to 20% in 1978.

SYSTEMS HARDWARE

LONDON

- 3 IBM 370/155s
- 1 Honeywell 3200 (on the way out)
- 2 Honeywell 64s

MANCHESTER

- ICL 1904 A

Terminals on-line

- IBM 1050 (5)
- IBM 3940 (80)
- Ventek (datapoint) 2200 (116)
- Data 100 (4)
- ITT 3030
- Systime
- DEC PDP 11 (6)
- ICL 7020

Compilers

- COBOL
- PL/1
- FORTRAN on IBM equipment
- Assembler
- RPG

- Plan
- Jean on ICL equipment
- FORTRAN

- COBOL
- Assembler on Honeywell equipment

COMPANY HIGHLIGHT

COMPOWER

COMPANY HIGHLIGHT

COMPOWER LTD.

Walsall Road

Cannock

West Midlands

Tel: (05435) 2511

G.A. BANNERMAN

Managing Director

THE COMPANY

- Compower is a British owned computer services company, a wholly owned subsidiary of the National Coal Board, and has developed into one of the leading computer bureaux in the U.K. servicing more than 1000 customers.
- Although operations commenced in 1970 its origins go back to 1958 when the coal industry began to install first generation computers. It became an autonomous, self-accounting subsidiary of NCB in 1973.

ORGANISATION

- Corporate headquarters are at Cannock but access to Compower facilities may be gained from regional service centres or by linking in to the company's transmission network. Support and consultancy services are provided locally from these centres:

-	East Midlands	-	Huthwaite Sutton in Ashfield, Notts. NG17 2NP Tel: (0623) 56801
-	North East	-	Gateshead, Tyne and Wear NE11 0JD Tel: (0632) 872121 Tlx. 53250
-	Wales and South West	-	Ystrad Mynach (Nr. Cardiff) Hengoed, Mid. Glamorgan CF8 7WF Tel: (0443) 812372 Tlx. 49557

- Scotland - West - Glasgow G3 6AN
Tel. (041) 332 6978
- North West - Lowton,
Nr. Warrington, Lancs WA3 2AG
Tel. (0942) 677611
Tlx. 67575
- Scotland - East - Edinburgh EH11 4DX
Tel. (031) 443 5391
- Yorkshire and - Doncaster, South Yorks, DN1 3HD
Humberside Tel.(0302) 67829/68017

- Compower runs a residential training school at Cannock Staffs which has an annual intake of over 2000 students including many from overseas. Regular courses are run throughout the year ranging in scope from a two week course on basic computer appreciation to a two-year ~~programming~~ course leading to a B.Sc. in computing.

TURNOVER AND STAFF GROWTH

- Compower undertakes much of the computer work for its parent company but third party sales plays a significant part in Compower's trading strategy

	Sales £(000's)	Nett Earnings £(000's)	Third Party Sales %
1973/4	5911	589	25.8
1974/5	8084	1080	25.9
1975/6	10579	1570	26.1
1976/7	12787	1839	27.1
1977/8	14358 (est.)	1850	28.2

- Compower has a total of over 1000 staff.

SYSTEMS HARDWARE

- Compower possesses the most up-to-date hardware from IBM and ICL at several of its service centres throughout the U.K., five of which are interlinked through Compower's wide-band transmission network. Access is offered the user by on-line remote batch or timesharing terminals linked into the network by telephone line or, alternatively, customers can deliver and collect work from local regional centres.
- Facilities include extensive networks of typewriter and high-speed terminals in addition to an increasing number of visual display units.
- Compower is also one of the country's largest users of optical character reading equipment which can read hand-written characters or printed information, including computer printed output or add-listener tally rolls and feed the information direct to the computer.

KEY PRODUCTS AND SERVICES

Compower provides a comprehensive selection of packaged application programs for commercial technical and scientific use. Programs are also written to customer specifications.

- Financial Business Services

Compower's range of financial services is designed to handle the bulk of a customer's clerical and accounting procedures and to provide essential information to management, and security arrangements ensure the information given is absolutely secure and confidential. Future processing is also guaranteed.

Systems have been designed on as broad a base as possible to suit the majority of businesses.

Compower have developed a range of flexible services to meet the special needs of a variety of trades, industries and financial interests, each one having been designed in collaboration with either trade associations or representative businesses and all having been proved in actual uses. Among businesses for which Compower have provided their services are road hauliers, manufacturers, milk and soft drink companies, brewers, machinery dealers and investment trusts as well as public authorities. An outline of some of the special services offered follows:

- Data Base Techniques:

Data handling and retrieval techniques, including design and development of integrated Data Base applications.

- Production Control Service:

A loading and scheduling service, providing reliable and accurate production information to assist decision making and increase manufacturing efficiency.

- Distribution Control Service:

A comprehensive service for businesses which deliver to householders or shopkeepers, reducing clerical work and improving control over stocks, cash collection and outstanding accounts.

- Motor Trade Accounting Service:

This utilises data bank principles to provide an integrated accounting system.

- Vehicle Parts Distribution Service:

This is for companies which carry large stocks of vehicle spares, designed to reduce the actual stocks held and thereby the costs of financing and accommodating them.

- Road Transport Service:

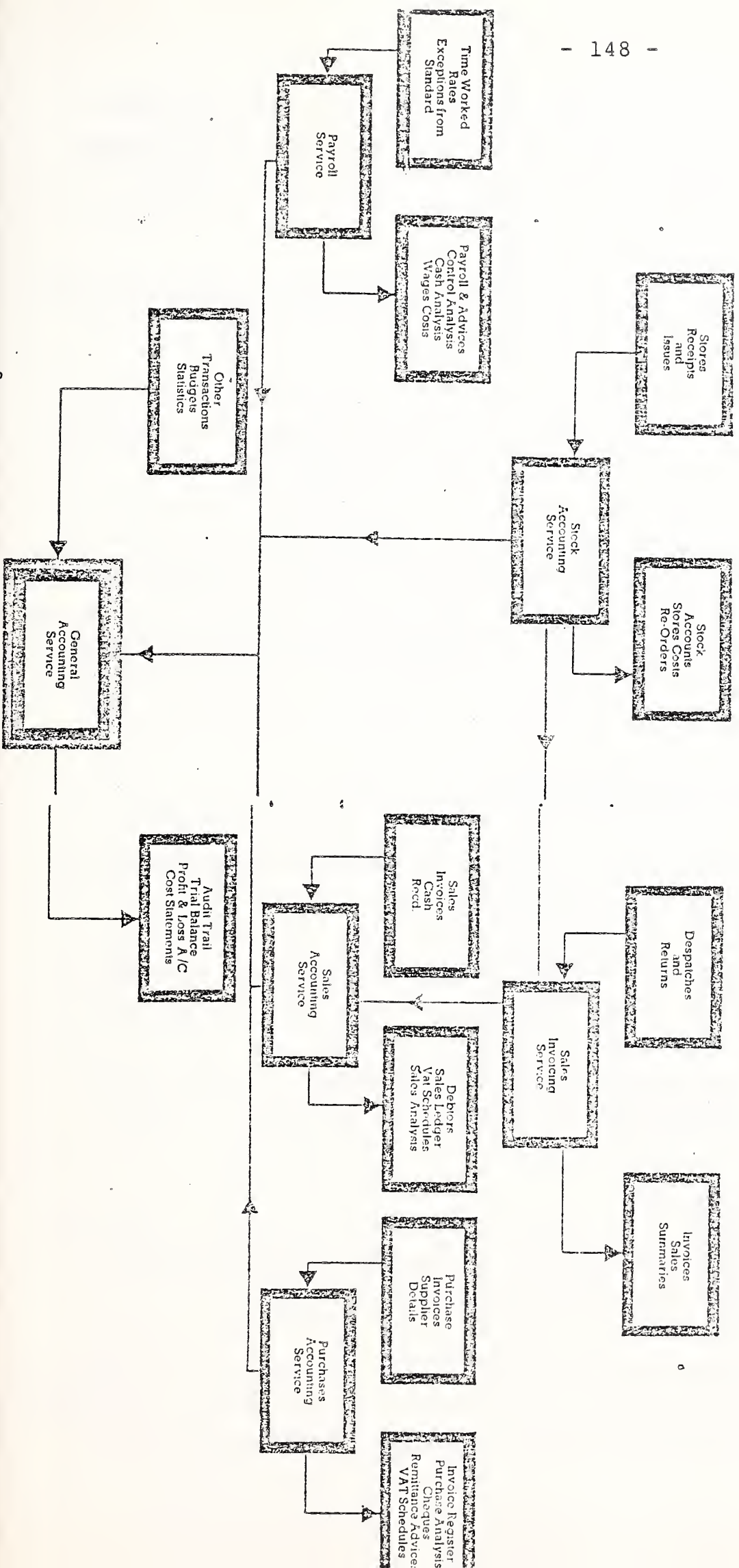
Provides valuable management information and avoids expensive and time consuming paperwork.

- Securities Management Service:

The Computer Power Securities Management Service is one of the

Computer Power Integrated Service

Various systems such as Payroll, Purchases Accounting, Sales Accounting can be used individually or incorporated into an Integrated Business Service. The details from each system can be fed automatically into the General Accounting Service which maintains the full books of account. The relationship between the various systems are shown below:



most comprehensive available in this specialised field and it specialises in handling large-scale superannuation scheme investments, investment trusts and small private trusts.

- Property Investment Management Service:

This is designed to assist companies in administering large and complex property investments.

- Rents Accounting Service:

Specially designed for organisations which control substantial interests in domestic or other types of property.

- Trade Association Services:

Compower are able to adapt one of their existing systems to cope with specific conditions common throughout a particular trade so that it can then be used economically by all the association's members.

• Technical and Engineering Services

Compower has a comprehensive library of technical and engineering programs to aid engineers involved in:

- Land Survey: A comprehensive suite of programs is available to compute and plot traverses and tachy surveys. Production of point plots, contour plans, isometric projections and sections. Provision for producing Digital Ground Models to BIPS format. Preparation of contours and isometric plots from X,Y, Z co-ordinate input.

ComPower.

- GENESYS: Computer is a bureau agent for the complete range of GENESYS sub-systems including R.C. Building Frame Analysis, Slab Bridge, Slip Circle and others.
- Structural Engineering and Bridge Design: Programs provided from the machine manufacturers' libraries of ICL and IBM and the Department of the Environment Highway Engineering Computer Branch library.

- Highway Design: Using the Dept. of Environment Highway Engineering Computer Branch programs, which include BIPS3. A further range of programs is available for cut and fill calculations and preparation of Digital Ground Models.
- Construction Industry: Survey setting out and R.C. design and project planning and network analysis using PERT and PMS.
- Traffic Engineering: Programs available include: Vehicle Scheduling, Traffic Survey Analysis and Traffic Flow Prediction.
- Electrical Engineering: A variety of programs to carry out electrical calculations is available including: D.C. Network Analysis, A.C. Load Flow and ~~Linear~~ Systems Analysis.
LINEAR.
- Heating and Ventilation Engineering: Programs available for calculation of closed circuit pipe sizing, district heating systems and ventilation network calculations.
- Geological and Mineral Excavation System: Programs available to examine the viability of mineral sites and to aid the design and operation of those sites.
- Soil Engineering and Strata Subsidence: Specialist Geotechnical programs available for soil mechanics, waste tip stability, rock mechanics and foundation engineering.
- Statistical Analysis: The BMD and GENSTAT statistical analysis systems are available. Facilities provided include: Multivariate Analysis, Regression Analysis, Time Series Analysis and Variance Analysis.
- Graph Plotting: These facilities are provided off-line by two CIL 7000 series drum plotters. Software available includes: Contour Maps, Isometric Drawings, Graphs, Statistical Representation.

COMPANY HIGHLIGHT
HOSKYNs

COMPANY HIGHLIGHT

HOSKYNS GROUP LTD.
91-93 Farringdon Road,
London EC1M 3LB

J.M. Feeney
Managing Director

Tel: (01) 242 1951
Telex: 25800

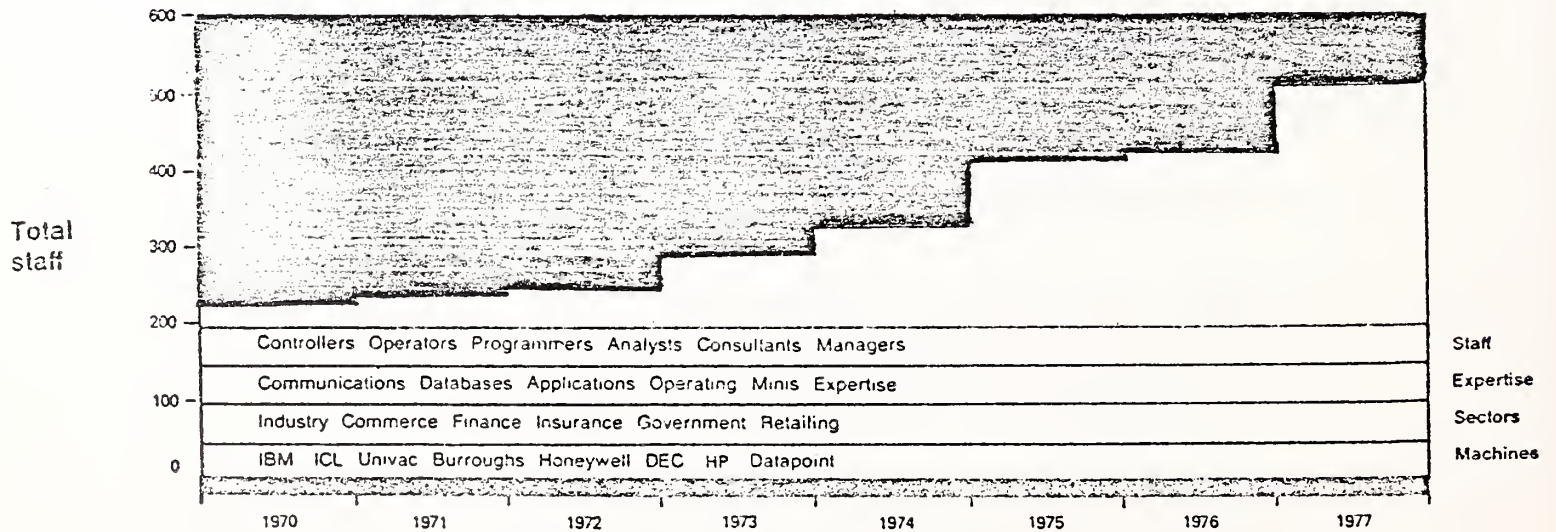
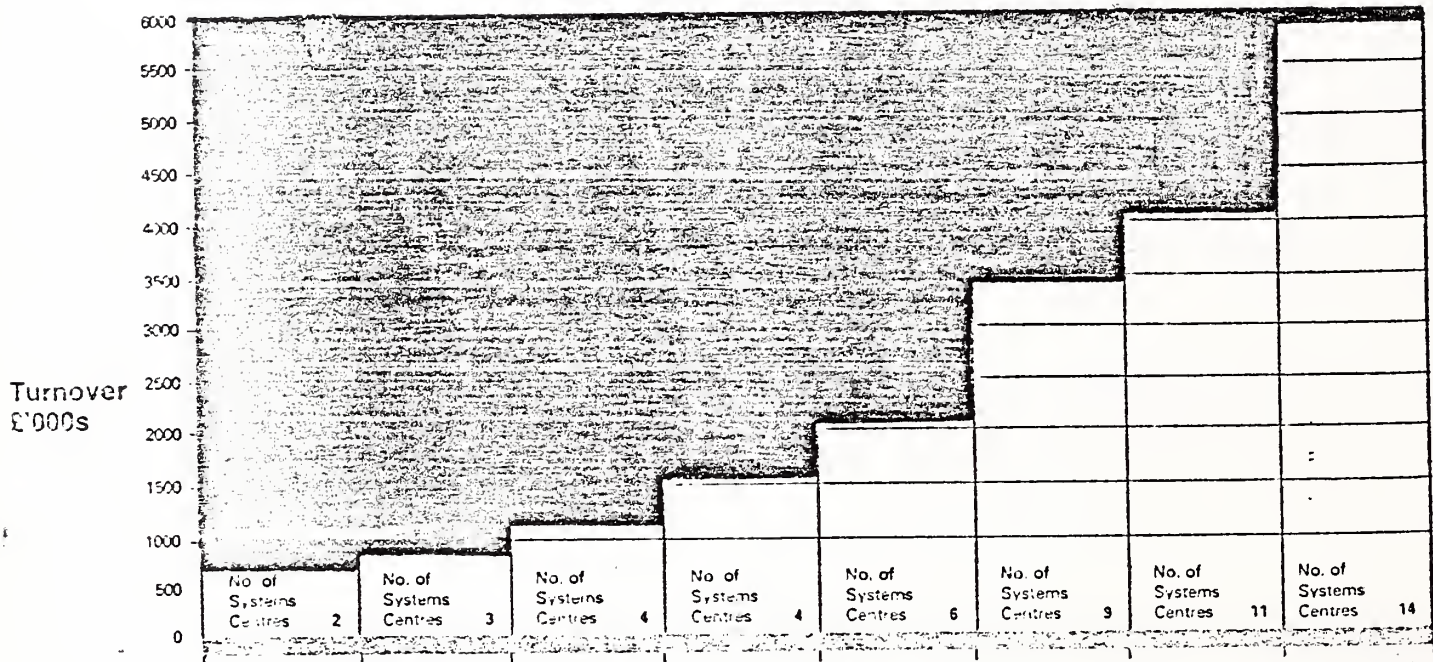
THE COMPANY

- Hoskyns Group was founded in 1964 and has grown into one of the major computer systems and service companies in the U.K. with world-wide operations.

ORGANISATION

- Hoskyns Group has two main U.K. operating companies:
 - John Hoskyns and Company Limited (JH & Co.)
 - Hoskyns Systems Limited (HSL)
- The Group has offices in Preston, Manchester, Liverpool, Stafford, Wolverhampton, Birmingham, Central London (2), City of London (2), Greater London (2), Rickmansworth, Bristol, Huddersfield and Sheffield.
- In 1975, Hoskyns became a part of the Data Systems division of Martin Marietta Corporation, a U.S. Corporation with a turnover of almost \$2,000 million.

TURNOVER AND STAFF GROWTH



SYSTEMS HARDWARE

- ICL 10 x 1900
4 x 2903
1 x 2904
- IBM 2 x 360
4 x 370

TURNOVER AND STAFF GROWTH

- The turnover figure for 1977 was around £6 million which was 44% up on the previous year.
- Staff totals 530 - 80 consultants, 100 analysts, 150 programmers and 200 operators.

KEY PRODUCTS AND SERVICES

- Some of the major services which the Hoskyns Group offer are:
- Turnkey projects with minicomputers

Hoskyns usually take full management responsibility for providing their clients with this total facility. This includes selecting, sizing and installing their mini (s), designing and building systems (often using MAS-M) and training their staff.

Their clients come from almost every section of commerce, finance and industry.

- Microcomputers

A development company within the Hoskyns Group (Hoskyns Systems Development Ltd.) specialises in using the newest microcomputer technology in commercial applications systems.

- Modular Application Systems

Hoskyns Modular Application Systems (MAS & MAS-M) are a total systems approach to the information and control requirements of commercial and manufacturing companies. Nearly 1000 MAS elements have been installed worldwide. Hoskyns have application systems for:

- Distribution
- Foundries
- Hotels
- Housing
- Manufacturing
- Shipping
- Transportation
- Vehicle Contracts/Leasing

These systems operate on a very wide range of mainframes, minis and micro-computers including DEC, DG, Ferranti, FP, IBM, ICL, Prime, TI and Univac.

- International Banking Systems

Hoskyns provide a highly flexible, integrated system which handles all the major retail and wholesale activities of international or domestic banks. It can operate on either a single branch or multi-branch basis. Applications handled include:

- Current & Savings Accounts
- Letter of Credit
- Loans and Deposits
- Bills - discounted and rediscounted
- Foreign Exchange
- General Ledger
- Commitments
- Profit and Loss

● Consultancy

Hoskyns has developed considerable experience in helping to meet the challenge of rapid changes in hardware, software and systems technology. Examples include:

- Strategic Studies
- Systems Design
- Project Management
- Systems Development Methodology

● Computer Bureaux

Hoskyns operate computer service bureaux throughout the U.K. and offer full service on mainly IBM and ICL computers. Their clients have a wide choice as to how they make use of their services. They can use the Hoskyns Systems Centres directly or they may choose to have a variety of terminal facilities on their premises, linked to their large computers. These terminals could themselves be mini or micro-computers, giving on-line enquiry facilities with instantaneous response.

● Facilities Management

Hoskyns is a leading FM contractor in the U.K. and has completed over 45 successful FM contracts, each one helping their clients to:

- Reduce costs without altering service levels
- Broaden career opportunities for staff
- Improve computing facilities at not cost
- Speed up and improve systems development plans
- Provide flexibility and assurance in an area of rapidly changing technology.

- Education Division

Hoskyns run courses for systems and programming staff, their managers, operations staff and non-computer professionals. The courses present practical solutions, and are based on the wide experience of Hoskyns Group in helping clients to build, install and run their computer systems. Their residential centre is in Bournemouth but they also regularly run courses all over the world.

COMPANY HIGHLIGHT

IBM

COMPANY HIGHLIGHT

THE IBM DCS AND RCS GROUPS

(part of the Data Processing Division
of IBM United Kingdom Ltd.,
Itself a subsidiary of IBM UK Holdings Ltd)
P.O. Box 41, North Harbour
Portsmouth, Hampshire PO6 3AU
Tel: 07018 21212

- IBM's Data Centre Services (DCS) and Remote Computing Services (RCS) are both part of the IBM Data Processing Division such that the actual sales performance cannot be separately indentified.
- In the mid 70's the Remote Batch and Interactive Timesharing business of IBM suffered from the loss of SBC, both in terms of public image and IBM management attention to the development of the European operations remaining from the takeover.
- That phase is at an end with an aggressive growth plan in the early stages of implementation. In comparison with IBM's other European markets, the U.K. RB and T/S revenues (of \$15m*) are in below of West Germany (\$12m*) but easily exceeded by those of France (\$22.3m*).
- Total Computer Services revenue (including Batch Services and Software Products revenue) modify this picture substantially. West Germany is the largest market with total revenues of \$27.5m*, followed by France (\$23m*) with the U.K. a distant third (\$19m*).
- IBM's new plan for a strong development of RB and T/S services has recently been dramatised in the specialised press by the preparations of the Warwick supercentre. This 174,000 sq. ft. office building and computer centre could eventually house as many as six 370/168's tied to a network of 80 high speed lines, interconnecting the 10 concentrators serving the UK market.

* INPUT estimate

- To date only one 370/168 has gone live with the concentrators switching customers input to either Warwick of the existing 370/155's in London, used for the Terminal Business System and Call Services. Warwick will also serve as a marketing, sales and services centre HQ for the Midlands.
- IBM continues to run Batch Bureaux in the South and the Midlands. At last count, these were:

CROYDON	2 x 370/158
	1 x 370/168
MANCHESTER	2 x 370/145
BIRMINGHAM	1 x 370/158
	1 x 370/135

- IBM's current hiring spree suggests however that there is to be a renewed attack by IBM on the RCS market which should be taken seriously by the top RCS vendors in the UK (Honeywell, Comshare and ADP-NIS) due to (a) the integrated education, service and support available nationwide to users of IBM's DCS/RCS services through DP Division (b) the sheer number of salesmen that IBM is acquiring and (c) IBM's image in all that it does.
- Possibly the greatest weakness in IBM's service is the lack of performance of the 370 line in the T/S environment when compared to, say, the DEC 10. IBM must of course, use only its own hardware, which in this particular operational environment puts them at a performance disadvantage.

KEY PRODUCTS AND SERVICES

- In April 1975, IBM announced A S (Application System). This was designed to allow users with no programming knowledge to apply CALL to his problems. Like CALL, A S is a command driven system, and runs as an integral application of CALL.

- The A S system offers several language/command modules:
 - A S REPORT (used to enter report format specifications)
 - A S MODEL (used to produce RPG II - like programs)
 - A S FORECASTING (obvious use)
 - A S GRAPH (high resolution curve plotting)
- IBM emphasises A S an Oliver/tabol type language system which offers functional compatibility between the modules. Its effect is to tie users into a single problem solving language, specific to IBM, rather than offering separate single packages which place their own learning curve demands on the user.
- Separate packages continue to be offered on CALL, however, the main ones being:
 - STATPACK (Statistical Analysis)
 - PNA (Network Analysis)
 - STRATPLAN (Financial Planning)
- STRATPLAN offers a variety of standard growth curves (linear, exponential, polynomial) which is dangerously simple. An unskilled user will not command an understanding of the theory behind these tools and so cannot appreciate the implications. (A professional will most likely want to build his own).
- CALL, IBM's T/S system, offers BASIC, FORTRAN and PL/1 as the main programming languages. Terminal Command Language covers the remote system communication, program entry/storage/execution and modification.
- There are four levels of library programs:
 - User library (Proprietary)
 - One star (Available within a company)
 - Two star (All CALL users)
 - Three star (IBM programs, available internationally, e.g. A S, PNA etc).

TERMINAL TYPES

- The following terminals can be used on CALL:
 - Teletype compatibles
 - Communicating Magnetic Card Typewriter
 - IBM 2740/1 (slow Keyboard Printer)
 - IBM 3767 (Keyboard printer, SDLC)
 - IBM 3770 family (diskette, programmable, SDLC)
 - IBM 2780 (RB)
 - IBM System (RB in 2780 mode).

DATA CENTRE SERVICES

- The main service of DCS is Terminal Business System geared towards the Batch/RB user who is beginning to expand into terminal-oriented applications.
- The basic strategy of TBS is to temporarily set up the user's terminal oriented applications on the IBM Data Centre and then transfer them in-house.
- DCS, therefore, is very much a staging post for IBM systems that are either being expanded on installed first time.
- There are four grades of RB services:
 - Fast (Processed within 15 minutes of queue entry)
 - Normal (Processed within 2 hours of queue entry)
 - Overnight (Self explanatory)
 - Deferred (Processed with 7 days of request or to an agreed schedule).
- Utilities include File Definition, File Loading, File Enquiry, Report Writer, File Maintenance and Utility Printing. Parameter commands such as Record and File parameters and Application Job parameters describe the content and sequence of data and processing.

- * Midlands Commercial - (All the above in the Midlands)
- * NW Commercial - (All the above in NW)
- * Leeds Commercial - (All types of business)
- * Scottish Commercial - (All except finance business in Scotland)

- **Manufacturing District**

- * London South Manufacturing
- * London North Manufacturing
- * North West Manufacturing
- * Midland Manufacturing - Mainly automotive business
- * Midlands Industrial - Other Manufacturing customers in Midlands
- * North East Manufacturing - All business in NE

- **GSD District**

- * Croydon Branch
- * Richmond Branch
- * Welwyn Branch
- * Birmingham Branch
- * Bristol
- * Glasgow
- * Manchester
- * Nottingham

- In 1977 this structure was completely overhauled, the 22 branches being reduced to 15 by essentially integrating the industry sector responsibilities into geographically oriented branches. The one exception is Banking which is reduced from two branches (London and Central) to one (London).
- Now each branch has industry specialist units for each of Government, Insurance, Finance (houses and institutions), Distribution, Printing/Publishing and Manufacturing, where this makes sense geographically.

- The result is an "all things to all people" approach matrixing mainframe hardware and peripherals, terminals, services (whether as an add-on to hardware or as a replacement for an in-house system) and industry expertise.
- For conversational processing Conversational Job Language (CJL) offers a language to analysts and programmers to describe the entire process they wish to accomplish. The program is then translated by a system utility and stored for retrieval/execution.

IBM UK Ltd Organisation

- DP Division integrates DCS and RCS. To follow the trend in IBM's market thinking, a comparison of the 1974 and 1977 organisation charts is therefore instructive. In 1974 there were five so-called "Districts" with five to six branches each:

- Government District

- * Government Branch (Central Dpts, MOD, Universities and Research)
- * Transport & National Enterprise (Surface/Air transport, GEGB & P.O.)
- * Government South (Local Gov./Educ., Public utilities and Medical in the Southeast)
- * Midlands Government (Same in Midlands)
- * North West Government and Finance (Same in North and West plus Finance in NW & Midlands)

- Finance District

- * Central Banking - (The main clearing banks)
- * London Banking -
- * Insurance Branch - (Insurance in the South)
- * Finance Branch - (Other finance houses in the South)
- * Edinburgh - (All financial institutions in Scotland)

- **Commercial District**

- * London Distribution (Retail, Wholesale, Consumer packaged goods, textiles).
- * London City Commercial (Conglomerates, printing, publishing and services)
- IBM's new DP Division sales organisation is as follows:

DP DIVISION

Director, DP Division P.C. Clarke

Sales Manager DP Division A.B. Cleaver

LONDON AND SOUTH EASTERN REGION

Manager, J.S. McCracken

Manager

South Eastern Branch	J.G. Tilt
South London DP Branch	N. Tonkin
North London DP Branch	A. Brace
London City Branch	H. Mackay
London Banking Branch	J.W. Nicoll

CENTRAL REGION

Manager, D.J. Livermore

Eastern DP Branch	H.W. Grotefeld
Central Southern DP Branch	P.A. Morrison
South Western DP Branch	R.H. Marriott

COMPANY HIGHLIGHT

LOWNDES-AJAX

COMPANY HIGHLIGHT

LOWNDES-AJAX COMPUTER SERVICES LTD.,
Milton House
Milton Road,
Croydon CR9 2XG
Surrey

P.N.W. Merrick
Managing Director

Tel: (01) 689 2244

THE COMPANY

- Lowndes-Ajax, a founder member of COSBA (now CSA) is a wholly-owned subsidiary of the Hill Samuel Group.
- Though still closely tied to the Group, 70-75% of their business is with companies outside the Group and this figure is increasing steadily every year.
- Metra Lowndes-Ajax is a majority owned subsidiary of Lowndes-Ajax.

TURNOVER, PROFIT AND STAFF GROWTH

- Lowndes-Ajax has 145 staff and for 1977 showed a figure of £3 million turnover.
- Metra Lowndes-Ajax has a staff of 40 and shows £1 million turnover.

SYSTEMS HARDWARE

- When founded in 1964 the company has an IBM 1401. This was changed to a small IBM 360/30 and an IBM 360/40 was added. Both these have now been replaced, first by two IBM 370/145's and now by one IBM 370/155 and one IBM 370/158 A.P.
- The 370/155 runs under VM/370 and the 370/158 A.P. under MVS. The 370/158 has a capacity of 4 megabytes * and the 370/155, 2 MB. All peripherals are switchable between the two CUP's.
- The company's teleprocessing network is cotroled by two 3705 communication controllers.
- Lowndes-Ajax has introduced an attached processor on the 370/158 and are introducing IBM Mass Storage towards the end of 1978.
- They have a stand-by generator.

KEY PRODUCTS AND SERVICES

- Lowndes-Ajax customers number over 300 and cover the full breadth of manufacturing, financial and commercial organisations as well as the public sector.
- Their range of services varies from £17 per month for payroll operation of solicitors to £'000's for a month for the operation of a complex fully-integrated system for a manufacturing company. The trend is towards remote operation.
- Lowndes-Ajax have a card punching capacity in excess of 1,000,000 cards per month.

- Their Computer Output Microfilm service is among the better equipped in Europe and caters for microfiche generated directly from computer magnetic tape. They used two Datagraphix 45/65 front end processors, guaranteeing complete in-house back-up facilities.
- Metra-Lowndes-Ajax offers contract computing staff of all types.
- Lowndes-Ajax has a development staff of over thirty systems analysts and programmers.
- Batch processing is available centrally or via terminals.
- VM/CMS service provides on-line program development and interactive processing via teletype terminals. A SUBMIT facility enables OS/VS1 and VM/CMS to be linked.
- Over the last five years, Lowndes-Ajax have built up a network of over 50 intelligent terminals on clients' premises all over the country sending data to Croydon, with line speeds varying from 300-9600 bps, dial-up and private circuit via a range of modems.
- The bureau Terminal centre at Warrington (51 Wilson Patten Street) offers Lowndes-Ajax services in the North West.
- Hardware here consists of a Data 100 with VDU, Punched Card Reader and Line Printer.
- Major services being utilised are Payroll, Accounting Control Systems, local Data Preparation support and RJE terminal network support.
- A 9600 multiplexor is available to enable companies in that area to access the central computer site whilst paying local GPO dial-up rates.
- The complete range of package services includes payroll, sales, bought and general ledgers, fixed asset accounting and financial planning.

COMPANY HIGHLIGHT

UCSL

COMPANY HIGHLIGHT

UNILEVER COMPUTER SERVICES LTD.

Station House

Harrow Road

Wembley

Middlesex HA9 6EB

J.J. Rawle

Chairman

Tel: (01) 903 1414

THE COMPANY

- UCSL was established in 1969 as a wholly-owned subsidiary of Unilever Ltd. It found business in the Unilever head office and the group research and distribution organisations and took over their existing computers, doing the work on a bureau basis.
- Unilever still provides 45 percent of UCSL revenue, but to remain competitive UCSL treats Unilever companies like any other company with which they do business.
- UCSL are just about to take over a company called Pensions and Insurance Computer Services (PICS) which specialises in applications in the pensions, insurance and actuarial industries.
- They have recently sold Computacar to Thomson Organisation.

ORGANISATION

- With its subsidiary, Anglia Data Services, UCSL Data Services has two main data centres with six offices linked to these main centres via RJE's. The two main centres are at Wembley, Basinstoke, Wirral, Norwich (an Anglia Data Services office), York and Blackfriars in London.

TURNOVER, PROFIT AND STAFF GROWTH

- UCSL has about 550 employees, around 200 of which are operations staff, including some part-timers, 100 at Anglia Data Services and 28 full-time marketing staff.
- From a first year turnover of around £900,000 UCSL has grown to approximately £8.7 million with pre-tax profits 10.8% of turnover. They forecast around £11.8 million for 1978 with a similar proportion of profits.
- The current growth rate on turnover is around 30% and Len Rawle, the Chairman would like to see his profits between 10 and 12% of turnover.

DATA SERVICES DIVISION HARDWARE

- At Watford:
 - IBM 360/65 x 2
most peripherals can be switched between the two processors
- At Burgess Hill:
 - IBM 360/65
itel AS/5
- The above hardware is in the process of being changed so that UCSL have three AS/5's and one 360/65. The AS/5 is equivalent to an IBM 370/158 in power.
- Languages used are:
 - PL/1, Cobol and Ramis (heavy usage)
 - Easytrieve (fair usage)

- Total, Dataman and Fortran (light usage).

Though Total, Dataman Ramis and Easytrieve and packages they include their own language facilities to a certain extent.

- Terminals:

There is capacity for about 120 I/O lines and most terminals are batch RJE devices.

Data 100 terminals are used with card reader and a line printer and mag tape, a vdu and some core memory are often configured on them. Some 90% are on leased lines although there are always some on dial-up.

Time-sharing users can dial up lines with slow-speed terminals like the DECwriter II, TI Silent 700 and the Teletype.

KEY PRODUCTS AND SERVICES

- Applications

UCSL publishes a 15-page catalogue for its application packages which fall into five groups.

- Databases: Ramis and Total
- Commercial: the usual ledgers and payroll systems
- Manufacturing: material control system
- Engineering: network planning (PMS for interactive usage, PROJACS for conversational RJE usage)
Design systems for piping, oil rig design and the STRUDL structural design language - drawing records system and materials take-off system (based on Ramis)
- Business Planning: CONSORT BUDGET 6 for budgeting UCSL STRATEGY for modelling.

Apart from the manufacturing packages, most of these are bought-in, although they have often been modified subsequently by UCSL to implement improvements.

Also available from UCSL are the more standard applications like SPSS, market research, media planning and linear programming.

- Data Preparation

UCSL has an in-house capacity at Blackfriars for 250,000 punched cards per month. Precision Data Preparation, an associated data prep bureau at Watford has capacity for the same figure again and UCSL also has access to outside data prep bureaux for extra work, totalling about 50,000 cards per month.

- UCSL can offer any service involving use of machine time which includes equipment leasing, general consultancy work and telecommunications consultancy which is a UCSL speciality.
- UCSL has several associated divisions which can provide other services:
 - UCSL Datacom - computer output on microfilm bureaux.
 - UCSL Microsystems Division which markets the Micronics hand-held data capture unit.
 - Anglia Data Services - a bureau operating from Norwich which turns over £1 million a year offering services for the smaller user.
 - Unilever Computer Services Ireland Ltd. (UCSI) - another autonomous bureau in the group with twin Burroughs B3500 machines, operating RJE and batch.
- All UCSL users (around 130) have access to batch work via RJE terminal.

PRODUCT AND MARKETING STRATEGY

- UCSL has a distinct marketing structure. Unilever sales deal with marketing to Unilever companies under three headings: large accounts, special accounts and management sciences. The national sales division deals with everyone else and has six sections, three of which are orientated geographically for the central, Southern and North-west regions and the other three are applications sections covering engineering, business planning and commercial systems. In general, a 'section' consists of salesmen, support analysts and project programmers.

APPENDIX - F

DEFINITIONS

APPENDIX F

DEFINITIONS

o COMPUTER SERVICES

These are services provided by vendors which perform data processing functions using vendor computers, or assist users to perform such functions on their own computers.

The following are definitions of the modes of service used in this report:

o REMOTE COMPUTING SERVICES (RCS)

Provision of data processing to a user by means of terminals at the user's site/s connected by a data communications network to the vendor's central computer. The three sub-modes of RCS are:

- 1 INTERACTIVE (timesharing) is characterised by interaction of the user with the system, primarily for problem solving timesharing, but also for data entry and transaction processing; the user is "on-line" to the programme/files.
- 2 REMOTE BATCH is where the user hands over control of a job to the vendor's computer which schedules job execution according to priorities and resource requirements.
- 3 ON SITE computing is a remote computing service (usually on a mini computer) provided by and connected to a computer service company installation. The mini computer enables the user to do processing against small files locally whilst resorting to the link with the computer service company installation for heavy processing power, manipulation of mass files and use of high speed output services.

and maintain the package at the users' sites. Fees for work performed by organisations other than the package vendor are counted in professional services. The two sub-categories are:

- 1 SYSTEMS PACKAGES are operating systems, utilities, and language routines that enable the computer/communications system to perform basic functions. This software is provided by the mainframe manufacturers with their hardware; other vendors provide improved versions of this and special-purpose routines. This classification includes compilers, data base management software, communications packages, simulators, performance measurement software, diagnostic software, and sorts.
- 2 APPLICATIONS PACKAGES are software which perform processing to serve user functions. They consist of general purpose packages, such as for accounting and inventory control, and special purpose packages, such as personal trust, airline scheduling, and demand deposit accounting.

o PROCESSING SERVICES

Processing services encompass FM, RCS, and batch services: they are categorised by type of service, as distinguished from mode of service, bought by users as follows:

- GENERAL BUSINESS services are processing services for applications which are common to users across industry categories. Software is provided by the vendor; this can be a complete package, such as a payroll package, or an application "tool", such as a budgeting model, where a user provides much of the customising of the finished product it uses. General business processing is often repetitive and transaction oriented.
- SCIENTIFIC AND ENGINEERING services are the processing of scientific and engineering problems for users across industries. The problems usually involve the solution of mathematical equations. Processing is generally problem solving and is non-repetitive, except in the sense that

o BATCH SERVICES

This includes data processing performed at vendor's sites of user programmes and/or data which are physically transported (as opposed to electronically by telecommunications media) to and/or from those sites. Data entry and data output services, such as keypunching and COM processing, are also included. Batch services include those expenditures by users which take their data to a vendor site which has a terminal connected to a remote computer used for the actual processing.

o FACILITIES MANAGEMENT (FM)

(Also referred to as "Resource Management" or "Systems Management".) The management of all or part of a user's data processing functions under a long-term contract (not less than one year). To qualify as FM, the contractor must directly plan and control as well as operate the facility provided to the user on-site, through communications lines, or in mixed mode. Simply providing resources, even though under a long-term contract and/or for all of a user's processing needs, does not necessarily qualify as FM.

o PROFESSIONAL SERVICES

Management consulting related to EDP, systems consulting, systems design and programming, and other professional services are included in this category. Services can be provided on a basis of: "Time and Materials", whereby the user pays for the time used of an individual on a daily or other fixed rate, or "Fixed Price", where the user pays a fixed fee for a specific task or series of tasks.

o SOFTWARE PRODUCTS

This category is for users' purchases of systems and applications packages for use on in-house computer systems. The figures quoted include lease and purchase expenditures, as well as fees for work performed by the vendor to implement

the same packages or "tools" are used to address different, but similar, problems.

- INDUSTRY SPECIALITY services provide processing for particular functions of problems unique to an industry or industry group. The software is provided by the vendor either as a complete package or as an application "tool" which the user employs to produce its unique solution. Speciality applications can be either business or scientific in orientation; data base services where the vendor supplies the data base and controls access to it (although it may be owned by a third party) are also included under this category. Examples of industry speciality applications are: seismic data processing, numerically-controlled machine tool software development, and demand deposit accounting.

- UTILITY services are those where the vendor provides access to a computer and/or communications network with basic software that enables any user to develop its own problem solution or processing system. These basic tools include terminal handling software, sorts, language compilers, data base management systems, information retrieval software, scientific library routines, and other systems software.

